



**Billing Code 3510–33-P**

**DEPARTMENT OF COMMERCE**

**Bureau of Industry and Security**

**15 CFR Part 774**

**[Docket No. 120330233-4307-03]**

**RIN 0694-AF64**

Revisions to the Export Administration Regulations (EAR): Control of Military Electronic Equipment and Other Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML)

**AGENCY:** Bureau of Industry and Security, Department of Commerce.

**ACTION:** Final rule.

**SUMMARY:** This final rule adds to the Commerce Control List military electronics, technology and software for certain wing folding systems, certain superconducting and cryogenic equipment, and related items the President determines no longer warrant control under the United States Munitions List (USML). This also amends ECCNs 7A006 and 7A106 to apply the “missile technology” reason for control only to items in those ECCNs on the Missile Technology Control Regime (MTCR) Annex. This rule is being published simultaneously with a Department of State rule that amends the list of articles controlled by USML Category XI to control only those articles the President has determined warrant control in that category of the USML. Both

rules are part of the President's Export Control Reform Initiative. The revisions in this rule also are part of the Department of Commerce's retrospective plan under EO 13563 completed in August 2011.

**DATES:** Effective dates – This rule is effective December 30, 2014, except for the addition of software and technology for certain wing folding systems to ECCNs 0D521 and 0E521 via Supplement No. 5 to part 774 of the EAR (amendatory instruction number 24), which is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** The Department of Commerce's full retrospective regulatory review plan can be accessed at: <http://open.commerce.gov/news/2011/08/23/commerce-plan-retrospective-analysis-existing-rules>

**FOR FURTHER INFORMATION CONTACT:** Brian Baker, Director, Electronics and Materials Division, Office of National Security and Technology Transfer Controls, (202) 482-5534, [brian.baker@bis.doc.gov](mailto:brian.baker@bis.doc.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

#### *The Export Control Reform Initiative.*

This final rule is part of the Administration's Export Control Reform Initiative, the objective of which is to protect and enhance U.S. national security interests. The Initiative began in August 2009 when President Obama directed the Administration to conduct a broad-based review of the

U.S. export control system to identify additional ways to enhance national security. In April 2010, then-Secretary of Defense Robert M. Gates, describing the initial results of that effort, explained that fundamental reform of the U.S. export control system is necessary to enhance national security. Once the Department of State's International Traffic in Arms Regulations (ITAR) and its U.S. Munitions List (USML) are amended so that they control only the items that provide the United States with a critical military or intelligence advantage or otherwise warrant such controls, and the Export Administration Regulations (EAR) are amended to control military items that do not warrant USML controls, the U.S. export control system will enhance national security by (i) improving interoperability of U.S. military forces with allied countries, (ii) strengthening the U.S. industrial base by, among other things, reducing incentives for foreign manufacturers to design out and avoid U.S.-origin content and services, and (iii) allowing export control officials to focus government resources on transactions that pose greater concern.

The changes described in this rule and the State Department's rule amending USML Category XI are based on a review of that category by the Defense Department, which worked with the Departments of State and Commerce in preparing the amendments. The review was focused on identifying the types of articles that are now controlled by the USML that either (i) are inherently military and otherwise warrant control on the USML, or (ii) if of a type common to civil applications, possess parameters or characteristics that provide a critical military or intelligence advantage to the United States and that are almost exclusively available from the United States. If an article was found to satisfy either or both of those criteria, the article remains on the USML. If an article was found not to satisfy either criterion, but is nonetheless a type of article that is "specially designed" for military applications, then, generally, it is identified in one of the new "600 series" ECCNs created by this rule.

Section 38(f) of the Arms Export Control Act (AECA) obligates the President to review the USML “to determine what items, if any, no longer warrant export controls under” the AECA. The President must report the results of the review to the Congress and wait 30 days before removing any such items from the USML. The report must “describe the nature of any controls to be imposed on that item under any other provision of law.” 22 U.S.C. § 2778(f)(1). The Department of State has delivered the required report to the Congress.

*The proposed rules.*

This final rule is the successor to two proposed rules, both entitled Revisions to the Export Administration Regulations (EAR): Control of Military Electronic Equipment and Related Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML). The first proposed rule (herein the November 28 (military electronics) rule) published in the Federal Register on November 28, 2012 (77 FR 70945). The second proposed rule (herein the July 25 (military electronics) rule) was based on a review of the public comments to the first proposed rule and published on July 25, 2013 (78 FR 45026). Simultaneously, the Department of State published two proposed rules on November 28, 2012 (77 FR 70945) (herein the State November 28 (military electronics) rule) and on July 25, 2013 (78 FR 45018) (herein the State July 25 (military electronics) rule). This final rule is based on an evaluation of those comments by the Departments of Defense, State and Commerce with additional input from other Departments on various portions of the rules.

In addition, this rule adds provisions controlling development software and technology for certain wing folding systems to the EAR. These provisions are related to prior proposed rules of the Departments of State and Commerce: “Amendments to the International Traffic in Arms

Regulations: Revisions of U.S. Munitions List Category VIII,” November 7, 2011 (76 FR 68694) (herein the State November 7 (aircraft) rule) and “Revisions to the Export Administration Regulations (EAR): Control of Aircraft and Related Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML),” November 7, 2011 (76 FR 68675) (herein the November 7 (aircraft) rule). Upon review of the current state of development of such software and technology, the Department of Commerce, with the concurrence of the Departments of Defense and State, concluded that they should be controlled for export under the EAR rather than the ITAR. This is because these items do not provide a critical military or intelligence advantage to the United States or otherwise warrant ITAR controls but they should be controlled because they provide at least a significant military or intelligence advantage to the United States or foreign policy reasons.

*Overview of this rule.*

This rule adds to the EAR’s CCL certain military electronic equipment and related articles now controlled by the ITAR’s USML Category XI and certain cryogenic and superconductive equipment that are now controlled by “catch all” provisions of the ITAR’s USML Categories VI, VII, VIII, and XV. This rule also corrects two ECCNs in CCL Category 7 to apply the “missile technology” reason for control only to items that are on the Missile Technology Control Regime (MTCR) Annex. Finally, this rule controls under ECCNs 0D521 and 0E521 software and technology for the “development” of certain wing folding systems for aircraft powered by gas turbine engines while the United States seeks to have such software and technology added to the Dual-Use List of the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies (Wassenaar Arrangement).

This rule also adopts the changes to the structure of the ECCNs and the elimination of the “Units” paragraphs from the ECCNs as set forth in the rule entitled “Revisions to the Export Administration Regulations (EAR) To Make the Commerce Control List (CCL) Clearer” published in the Federal Register on October 4, 2013 (78 FR 61874).

*Alignment with the Wassenaar Arrangement Munitions List.*

The Administration has stated since the beginning of the Export Control Reform Initiative that the reforms are consistent with the obligations of the United States to the multilateral export control regimes. Accordingly, the Administration, in this and subsequent rules, exercises its national discretion to implement, clarify, and, to the extent feasible, align its control text with those of the regimes. This rule maintains the alignment that exists between the USML, in which military electronics are controlled under Category XI, and the Wassenaar Arrangement Munitions List (herein WAML), in which military electronic equipment is controlled under WAML category ML11, and by ECCN 3A611 by this rule. Similarly, 3B611 aligns with WAML category ML18, which, *inter alia*, controls “specially designed or modified ‘production’ equipment for the ‘production’ of products specified by the Munitions List, and “specially designed” components therefor.”

This rule aligns cryogenic and superconducting equipment currently controlled in Categories VI, VII, VIII, and XV of the USML with WAML category ML20 by controlling them under ECCN 9A620. As with other “600 series” ECCNs, this rule follows the existing CCL numbering pattern for test, inspection and production equipment (3B611 and 9B620), software (3D611 and 9D620) and technology (3E611 and 9E620), rather than strictly following the Wassenaar Arrangement Munitions List pattern of placing production equipment, software and technology

for munitions list items in WAML categories ML18, ML21 and ML22, respectively. BIS believes that including the ECCNs for test, inspection and production equipment, software, and technology in the same category as the items to which they relate results in an easier to understand CCL than would separate categories.

**Public Comments on the July 25 (military electronics) rule and BIS responses.**

*Comments concerning manner of listing items controlled only for antiterrorism and China military end-use reasons.*

Previous rules creating new “600 series” ECCNs have included paragraphs in some of those ECCNs, designated as .y paragraphs, which list items that require a license only if going to countries that have been designated as State Sponsors of Terrorism or to the People’s Republic of China. In the preamble to the July 25 (military electronics) rule, BIS announced that it was considering four options to address items of limited military significance for which a license is required only if destined for a terrorist supporting destination or the People’s Republic of China. Those options are: 1) creating separate ECCN-specific .y paragraphs; 2) creating a single list of “600 series” items subject only to antiterrorism and China military end-use license requirements; 3) establishing a classification request procedure whereby a “600 series” item could be designated as subject to only antiterrorism and China military end-use license requirements, but eliminating the .y listings from the regulations; or 4) removing all .y lists completely. BIS invited comments on these four options.

Comment 1:

Comments were divided between options 1 and 2 – the options that result in more complex, detailed, and tailored ECCNs. No commenter supported options 3 or 4 – the options that would have resulted in significantly shorter and simpler ECCNs. One commenter stated of the four listed options, it favored number 2, but also proposed combining options 1 and 2 to form a fifth option. Under that fifth option, BIS would compile a single .y list composed of basic hardware that is common to many ECCNs and also would list .y items that are specific to particular ECCNs in .y paragraphs within those ECCNs.

Response 1:

BIS has decided to accept the commenters’ requests for a more complex, tailored regulatory structure by creating a type of a single .y list so that less significant controls are imposed on the less significant items listed. In addition, BIS believes that most of the items that would be appropriate for .y treatment are electronic in nature. Therefore, rather than create a new ECCN to cover such items, this final rule revises the .y paragraph in ECCN 3A611 to include parts, components, accessories and attachments that are eligible for .y treatment regardless of the ECCN of the “600 series” item that they are used in or with. Thus, BIS has revised the heading of paragraph .y to apply to “Specific “parts,” “components,” “accessories” and “attachments” “specially designed” for a commodity subject to control in a “600 series” ECCN and not elsewhere specified in *any* “600 series” ECCN . . . .” This revision combines the benefits of options 1 and 2. BIS did not adopt option 3 because it would create a time consuming process and, although it would tailor .y classification decisions closely to the characteristics of individual items, it would not provide public notice of its results. BIS did not adopt option 4 because doing so would impose license requirements that apply to more destinations and licensing policies that are more restrictive than are warranted for the items that have been selected for .y treatment.



*Comments proposing additional items .y paragraphs.*

Comment 2:

Commenters suggested over 100 items that they believed should be included in .y paragraphs (or excluded from the definition of “specially designed”). The commenters favored, in descending order of preference: exclusion from the definition of “specially designed,” then inclusion on a universal .y list, and finally inclusion in ECCN 3A611.y. One commenter included in its list some items that were already in ECCN 3A611.y or were already excluded from the definition of specially designed.

Response 2:

Technical experts from the Department of Defense reviewed the items suggested by the commenters. On the basis of that review, this final rule includes 37 commodities in ECCN 3A611.y, but also gives that paragraph the status of a universal .y list – *i.e.*, the 3A611.y commodities are those “specially designed” for *any* “600 series” item or defense article on the USML, not just those “specially designed” for 3A611 items or USML Category XI defense articles. Export license requirements allow the United States Government to see the pattern of usage of military equipment. The knowledge of usage patterns of even parts and components that are relatively unsophisticated or that do not directly contribute to the military functions of a “600 series” commodity can provide valuable insights into military capabilities and activities of other nations. Therefore, the .y classification must be limited to those parts, components, accessories and attachments for which knowledge of usage patterns are unlikely to provide such insights. Based on the technical experts’ review, this final rule removes 11 paragraphs that were included in the July 25 (military electronics) rule because the commodities they listed were

redundant or problematic from a nomenclature standpoint. Those 11 commodities are: 1) electric couplings; 2) cathode ray tubes; 3) rotron fans; 4) electric fuses other than those “specially designed” for explosive detonation; 5) grid vacuum tubes; 6) audio headphones, earphones, handsets, and headsets; 7) intercom systems; 8) loudspeakers; 9) electric switches other than RF, pressure, diplexer, duplexer, circulator or isolator switches; 10) vacuum tubes other than TWTs, klystron tubes, or tubes “specially designed” for articles enumerated in USML Category XII; and 11) waveguides. This final rule adds 22 paragraphs for a total of 35.

#### Comment 3:

In commenting on the items to be included in the .y paragraphs, one commenter suggested that certain items should be excluded from the specially designed definition based on paragraph (b)(2) of that definition. Those items are not expressly mentioned in paragraph (b)(2) but the commenter implied that they are included within the scope of the items that are expressly mentioned. Spacers, fasteners and grommets are expressly mentioned in paragraph (b)(2). This commenter listed circuit board and enclosure hardware and standoffs as examples of spacers. It listed “rods, thumbscrews, standoffs, and turnbuckles, etc.” as examples of fasteners. It listed grommet strips as grommets.

#### Response 3:

The July 25 (military electronics) rule did not propose changes to nor did it request comments on paragraph (b)(2) of “specially designed.” As with all provisions of the EAR, BIS is reviewing ways to make them current and directly relevant to the objectives of the EAR. Thus, BIS will consider at another time whether paragraph (b)(2) warrants revision. BIS reminds the commenter that § 748.3(e) invites the submissions of classification requests for consideration by the

Departments of Defense, State, and Commerce regarding whether, under paragraph (b)(1) of “specially designed,” extraordinarily insignificant items not listed in paragraph (b)(2) warrant treatment as “specially designed” items.

*Comments concerning whether to move certain “600 series” electronic items from CCL Category 3 to CCL categories containing similar non- “600 series” items.*

The July 25 (military electronics) rule included radars, acoustic systems, computers, telecommunications equipment, and navigation and avionics equipment “specially designed” for a military use in a single CCL category (Category 3 – Electronics). Doing so is consistent with the USML, which also covers such commodities in a single category (Category XI – Military Electronics). However, the CCL divides those same types of items not “specially designed” for a military use into four categories. Computers are in Category 4 – Computers.

Telecommunication equipment is in Category 5, Part 1 – Telecommunications. Radars and acoustic systems are in Category 6 – Sensors and Lasers. Navigation and avionics equipment are in Category 7 – Navigation and Avionics. The July 25 (military electronics) rule proposed to place in Categories 4, 5, 6 and 7 ECCNs that contain no substantive text but merely advised readers that proposed ECCN 3A611 in Category 3 controlled radars, acoustic systems, computers and telecommunications equipment “specially designed” for a military use. The rule invited comment on which approach to take, 1) the July 25 (military electronics) rule approach of placing the items in a single category with cross references or 2) placing each type of item in the category that includes similar items that already are on the CCL.

Comment 4:

Comments were divided on this topic. Two reasons were provided in support of placing these “600 series” items in the categories that control similar items currently on the CCL. First, having similar items (*e.g.*, military radar and civil radar) in different categories is likely to lead to confusion and misclassification or even incorrect ECCNs on licenses. Second, moving military computers, telecommunications devices and radars to separate categories that are aligned with the current CCL is likely to be necessary as the government moves towards its stated goal of a single control list for both military and commercial items.

Four reasons were provided in support of placing these “600 series” items in a single CCL category. 1) Such placement would better align such items with the order of review (Supplement No. 4 to Part 774 of the EAR). 2) The Department of State Export Control Reform rules tend to classify components according to the end item for which they are designed. 3) The items in CCL Category 3 in the proposed rule often are installed into other items. 4) The existing CCL approach, which follows the pattern of the Wassenaar Arrangement Dual Use List (although the lack of a definition for “avionics” sometimes causes uncertainty as to whether a component in CCL Category 7 or Category 9).

One commenter also noted that BIS does not appear to have contemplated creating specialized electronics ECCNs related to end items (*e.g.*, 0Y611 for vehicle electronics or 8Y611 for surface vessel and submersible electronics).

Response 4:

On balance, BIS has concluded that the approach proposed in the July 25 (military electronics) rule is the better of the two. The alternative would have resulted in the creation of 20 new ECCNs with no change in the scope of controls. Accordingly, this final rule makes no changes

to the July 25 (military electronics) rule on this point. As noted above, commenters made valid points for both approaches. However, BIS has concluded that attempting to spread the contents of proposed ECCN 3A611 over five CCL categories (one each for radar, acoustic sensors, telecommunications equipment, computers and electronic parts and component that are common to multiple categories) would unnecessarily complicate and lengthen the EAR.

As noticed by one commenter, BIS did not propose creating new ECCNs in categories 0 and 8 for electronic items that are specially designed for ground vehicles, surface vessels and submersibles. BIS believes that such ECCNs are not necessary because as noted in the related controls paragraph of ECCN 3A611 in the July 25 (military electronics) rule and in this final rule “Electronic items ‘specially designed’ for military application that are not controlled in any USML category but are within the scope of another ‘600 series’ ECCN are controlled by that ‘600 series’ ECCN.” This sentence would resolve any ambiguity concerning whether a particular device is to be treated as a specially designed part of a land vehicle, surface vessel or submersible vessel or as a military electronic item controlled under 3A611.

Three of the four types of items about which BIS sought comments on possible movement from CCL Category 3 to CCL categories containing similar non-“600 series” are computers, telecommunication, and radar. Each of these three was expressly mentioned in ECCN 3A611 in the July 25 (military electronics) rule and each is expressly mentioned in a category other than Category 3 on the CCL. The fourth, avionics, was added to the proposal in response to a comment on the November 28 (military electronics) rule. Land vehicles, surface vessels and submersible vessels are not expressly mentioned in ECCN 3A611 and were not suggested by any commenters. Therefore, less likelihood of confusion existed in the case of these items than in the case of the items about which BIS sought comments on this topic.

*Comments concerning defining elements used in “600 series” software and technology ECCNs.*

Comment 5:

Two commenters objected to the use of the word “or” in software and technology “600 series” ECCNs, which apply, respectively, to software for the “development,” “production,” operation or maintenance of specified items and to technology for the “development,” “production,” operation, installation, maintenance, repair, overhaul or refurbishing of specified items. The commenters noted that BIS interprets the elements of “use” software and technology elsewhere in the EAR as operation, installation, maintenance, repair, overhaul and refurbishing.” The commenters stated that use of the disjunctive in the “600 series” ECCNs would force academic institutions to screen foreign students and visitors before even showing them how to operate “600 series” or other ECCN equipment. The commenters expressed the opinion that such screening would require expensive, complex security programs with no clear national security benefit.

One commenter noted that in response to similar comments in other rules creating “600 series” ECCNs, BIS stated that “[n]early all the software and technology in existing and proposed “600 series” ECCNs comes from USML categories. One goal of the U.S. government in the Export Control Reform Initiative is not to decontrol completely and inadvertently items the President determines no longer warrant control on the USML.” The commenter noted that “BIS believes the ‘or’ formulation achieves this objective.” The commenter found this reason “unpersuasive” because “[i]t essentially states that even though the items are being transferred to the CCL they still will be subject to USML type controls. In our opinion, this contradicts the objectives of the Export Control Reform Initiative to create ‘bright lines’ between the two control lists. We worry

that by creating inconsistencies within the EAR this will lead to confusion and misunderstanding. Moreover, this outcome appears inconsistent with the goal of the Export Control Reform Initiative to reduce unnecessary and burdensome controls and to allow the government and regulated community to focus resources on transactions that pose the greatest concern.”

Response 5:

BIS continues to believe in identifying in the new software and technology controls the types of software and technology that warrant control. The controls are not increasing or decreasing the scope of what is controlled under the ITAR’s definition of “technical data.” (See 22 CFR § 120.10). Thus, BIS is not increasing the regulatory compliance burden with respect to such technology. To the contrary, it is reducing the regulatory compliance burden with respect to such software and technology to the extent their release would be within the scope of one of the license exceptions (such as License Exception STA) that is available in the EAR but not in the ITAR.

The commenters’ proposal would result in a significant decontrol of technology that is now ITAR controlled, which is not the objective of the reform effort or this final rule. BIS recognizes that it is treating software and technology for “600 series” items more strictly than software and technology for similar dual-use items. However, this stricter treatment is warranted because of the military nature of the “600 series” items to which the software and technology relate.

BIS also recognizes that its decision requires academic institutions to be aware of the nationalities of students and researchers for whom they provide instruction on how to operate these items that are “specially designed” for military applications and, in some instances, obtain

authorization before providing such instruction even if the recipient of the instruction uses the item for a civil or commercial purpose. Again, BIS believes that this requirement is justified by the military nature of the items enumerated in the “600 series” ECCNs. Moreover, these requirements are no stricter or more burdensome than the requirements currently imposed for these items by the ITAR.

*Recommendations for removal of certain EAR provisions as erroneous or obsolete.*

Comment 6:

One commenter recommended removing text describing certain helix tubes, microwave solid state amplifiers and traveling wave tube amplifiers from the related control notes ECCNs 3A001, 3D001, and 3E001 that direct the reader to regulations of the Department of State, Directorate of Defense Trade Controls (DDTC). This same commenter recommended removing similar references to technology for certain electron vacuum tubes from the related control notes of ECCN 3E003. The commenter recommended these changes because under proposed rules published by the Department of State these items would not be “positively controlled under Category XI or XV of the USML.”

Response 6:

BIS agrees with the commenter’s assessment and concludes that changes made to USML Category XV by the rule entitled “Amendments to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XV (79 FR 27180, May 13, 2014) and by the revisions to USML Category XI being published simultaneously with this rule make obsolete all of the references in the “Related Controls” paragraphs of ECCNs 3A001 and 3D001, all of the



references in the “Related Controls” paragraph of ECCN 3E001 except those to ECCN 3E101 and 3E201 and all of the references in the “Related Controls” paragraph of 3E003 except that to 3E001. Accordingly, this final rule revises “Related Controls” paragraphs in ECCNs 3A001, 3D001, 3E001 and 3E003 to remove the obsolete references. This rule also adds general references to USML Categories XI and XV and ECCNs 9A515 and 3A611 to the related controls paragraph of ECCN 3A001.

*Comments concerning ECCN 3A611, in general.*

Comment 7:

One commenter recommended adding the phrase “not enumerated in either a USML category or another ECCN” to the heading of ECCN 3A611 and removing similar text from paragraph .a of that ECCN. The commenter said that the statement applies to the entire ECCN not just paragraph .a.

Response 7:

BIS is making no changes to the rule in response to this comment. As noted in Supplement No. 4 to Part 774 of the EAR -- the Commerce Control List Order of Review, the USML takes precedence over the CCL. That precedence applies to all ECCNs, and BIS believes that it is not necessary to reiterate this concept in the heading of the “600 series” ECCNs.

Comment 8:

One commenter recommended that in the “Reasons for Control,” the phrase “NS applies to entire entry except 3A611.y” be revised to read “NS applies to entire entry except 3x611.y or other

portions of 3x611 not controlled by Wassenaar Munitions List or Wassenaar Dual-Use List” to comply with Section 5(c)(6) of the Export Administration Act, which prescribes certain limits on unilateral national security export controls, and that such unilateral controls should be identified on the CCL. This commenter also recommended that the missile technology (MT) reason for control be added to ECCN 3A611 with the phrase “MT applies to portion of 3x611 controlled by MTCR – MT Column 1” because items covered on the Missile Technology Control Regime (MTCR) Annex (the basis for imposing the MT reason for control in the EAR) should be identified. The commenter indicated that his reasoning for this proposal was that it might not be possible to identify all items in 3A611 that are covered on the MTCR Annex at this time because continuing transfers “make this a moving target,” suggesting that once the Export Control Reform Initiative was complete a comprehensive review would be in order.

Response 8:

BIS is making no changes to the rule in response to this comment. BIS believes that all of the items covered by ECCN 3A611 (including those listed in 3A611.y) and all of the items covered by ECCNs 3B611, 3D611 and 3E611 are within the scope of the Wassenaar Arrangement Munitions List. BIS also believes that none of the items in ECCN 3A611 as published in this final rule are listed on the MTCR Annex.

Comment 9:

One commenter recommended removing related controls (1), (2), (4) and (5), which identify items that are subject to the ITAR, from the “Related Controls” paragraph of ECCN 3A611 because the “ITAR, rather than the EAR, should define what is controlled on the ITAR.” The commenter stated specifically that part (1) is redundant, especially if the commenter’s

recommendation to put “not enumerated in ... a USML category” in the heading of 3A611 is accepted. The commenter recommended that if “Part (2)” is retained, it should be revised to change “defense articles” to “a characteristic in the text of a U.S. Munitions List description of a defense article.” Without that change, the commenter asserted the specific application could concern a trivial functionality having no connection to the reason for the control of the defense article. Parts (4) and (5), if retained, should similarly be revised to change “is ‘specially designed’ for defense articles” to “further a characteristic in the text of a U.S. Munitions List description of a defense article.”

Response 9:

BIS is making no changes to the rule based on this comment. One purpose of related control notes is to alert readers to regulations published by other government agencies that control items related to those controlled on the CCL (*see* 15 CFR 738.2(d)(2)(iii)(B)). The four paragraphs that the commenter recommended be removed provide such alerts with respect to commodities controlled by the ITAR that are related to items controlled in ECCN 3A611. The EAR cannot define what is controlled on the ITAR, and BIS does not intend that they do so. That which is subject to the jurisdiction of the ITAR is that which is described in the ITAR’s U.S. Munitions List. See 22 CFR §§ 120.6 and 121.1. However, BIS believes that such cross references help readers who need to understand the relationship between the ITAR and the EAR – two separate bodies of rules that regulate exports and reexports – and encourage readers to read the relevant USML categories when determining the jurisdictional and classification status of items.

Comment 10:

One commenter recommended either deleting ECCN 3A611.a (and 3A611.x Note 1, 4A611, 5A611, 6A611, 7A611) or changing the phrase “‘specially designed’ for military use” to either “having a predominant military use” or “having a critical military or intelligence advantage.” This commenter stated that as defined in the EAR, the term “specially designed” does not make sense when applied to end items. Paragraph (a)(1) of the “specially designed” definition applies to end items. Under that paragraph, an item is “specially designed” if it is peculiarly responsible for achieving or exceeding controlled performance levels, characteristics, or functions. The commenter stated that “military use” is not a performance level or a characteristic. The function of “military use” is achieved by any military use. Therefore, under this definition, there is no difference between “specially designed for military use” and just “military use.” The commenter stated that removal of 3A611.a would be consistent with the goals of the Export Control Reform Initiative to avoid controls based simply on military use. Additionally, the commenter asserted that “‘Military use’ with no further modification is far broader than existing [§] 120.3(a) [of the ITAR].”

Response 10:

This final rule replaces the term “military use” in ECCN 3A611 with the phrase “military application” to clarify that mere use by a military organization does not bring something within the ambit of ECCN 3A611. One of the goals of the current phase of export control reform is to control on the CCL items the President determines no longer warrant control on the USML without inadvertently decontrolling items currently on the USML. To do so, some standards must be expressed in broad terms. BIS believes that the phrase “‘specially designed’ for a military application” provides adequate specificity and clarity to distinguish items that are developed in ways that enable them to perform a military role or function from items that,

although used by the military, are indistinguishable from items that are widely used in civil activities. Thus, contrary to the assertion of the commenter, paragraph (a)(1) of the definition is relevant to such controls because “military application” is the referenced “characteristic.” If someone does something to an item during its development to achieve the characteristic of being for a military application, then the item would be within the scope of paragraph (a)(1). The term “characteristic” was never limited to technical control thresholds, such as heat, speed, size, power, or strength.

Comment 11:

One commenter recommended changing the phrase “nor controlled in another “600 series” ECCN” to “nor controlled in another ECCN” in ECCNs 3A611.a, 3A611.a Note 1, 3A611.x Note 1, 3B611.a, 3B611.x, and 7A611. This same commenter recommended inserting “or another ECCN” following the phrase “not enumerated in any USML category” in ECCNs 4A611 and 5A611. The commenter asserted that many existing ECCNs, after years of intense negotiations, have technical descriptions designed to be more precise than “military use” or “specially designed.” The commenter argued that this “progress toward these major objectives of the ECR would be undone in these areas unless this recommendation is accepted.”

Response 11:

The changes proposed by the commenter are inconsistent with the order of review in Supplement No. 4 to Part 774 of the EAR. That order specifies that “600 series” ECCNs take precedence over non-600 series ECCNs. Therefore, this final rule does not adopt the changes proposed in this comment. This means that if an item were “specially designed” for a military application or a military item not described on the USML, then it would be within the scope of a 600 series

ECCN, even if the same type of item were described in an ECCN elsewhere on the CCL. This is not a change from the long-standing rule under the ITAR that if a part or component were specifically designed or modified for a defense article, then the part or component would be ITAR controlled, even if the CCL described the same item or type of item.

*Comments concerning ECCN 3A611.a -- Electronic “equipment,” “end items” and “systems” “specially designed” for military end use that are not enumerated in any USML category or controlled by another “600 series” ECCN.*

Comment 12:

One commenter stated that electronically steerable airborne weather radar should not be controlled by USML Category XI because its use is for civil aviation. The State July 25 (military electronics) rule would have included all “[r]adar incorporating pulsed operation with electronics steering of transmit beam in elevation and azimuth” in USML Category XI. This commenter proposed eight characteristics that it believed should exclude such radars from the USML. The commenter believes that if electronically steerable radar that it manufactures were not controlled in Category XI of the USML, it would be subject to the EAR and controlled in ECCN 6A998.a. The commenter pointed out the necessity of rapidly shipping replacement radar units or parts to replace or repair broken radar units in aircraft that may be on the ground in any of a large number of countries. The commenter noted that if a radar unit were classified in a “600 series” ECCN, the ability to use License Exception STA would be sharply curtailed. The commenter stated that a radar designed for a civil aircraft application should be eligible for License Exceptions STA and RPL.

Response 12:

BIS is making no changes to the rule based on this comment.

A similar comment on the State July 25 (military electronics) rule was submitted to that department. After considering that comment, the Department of State has added a note to Category XI(a)(3)(xii) excluding radars, not otherwise controlled in the ITAR, operating with a peak transmit power less than or equal to 250 watts, and employing a design determined to be subject to the EAR via a commodity jurisdiction determination. Please see the Department of State's companion to this rule for its full response to the comment.

If an airborne radar unit has been determined to be subject to the EAR pursuant to such a commodity jurisdiction, it would be subject to the EAR. If the radar were given a CCL classification as part of that commodity jurisdiction process, the ECCN so given would govern. If the classification were not given as part of the commodity jurisdiction process, the order of review in Supplement No. 4 to Part 774 of the EAR would govern its treatment under the EAR. Following the order of review, one would proceed to the "600 series." If the radar were a "specially designed" part for an aircraft controlled under ECCN 9A610 – Military aircraft and related items, paragraph .x of that ECCN would control the radar. If it were not so "specially designed," one would check 3A611.a (electronics "specially designed" for a military application) and 3A611.x "specially designed" for a commodity controlled in USML Category XI. If the radar were not so specially designed, one would look outside the "600 series" to CCL Category 6. BIS notes that most radars used in civil aircraft are controlled by ECCN 6A998.a.

Comment 13:

One commenter recommended that proposed ECCN 3A611.a be revised to clarify that it does not control routine telecommunications or computer networks used by a military end-user for

administrative functions, where such networks utilize only equipment and software that are not enumerated in a USML Category or controlled by a “600 series” ECCN and where such networks that do not contain, and are not designed or configured to contain, types of security as described in USML Category XIII(b).

This commenter noted that military organizations use communications networks for command and control purposes and for routine administrative matters or, in some instances, to facilitate communications home by troops stationed abroad. The commenter stated that even though operated by the military, communication networks for administrative purposes typically have no higher level of security than similar networks used by a business or even a residential end-user - whereas command and control networks typically use special encryption devices controlled under USML Category XIII(b) to maintain a higher level of security. This commenter suggested that, based on the definition of “system” in the EAR, and the phrase “specially designed for military use,” as it appears in ECCN 3A611.a and in the note immediately following that paragraph, could be read to include administrative communications networks that do not contain, and were not designed or configured, to contain USML Category XIII(b) levels of security that would be considered "specially designed" for military use. The commenter recommended adding a note stating:

ECCN 3A611.a does not include a routine telecommunications or computer network that utilizes only equipment and software that are not enumerated in a USML Category or controlled by a "600 series" ECCN where the network does not contain, and is not designed or configured to contain, types of security as described in USML Category XIII(b).



Response 13:

BIS does not intend that ECCN 3A611.a apply to communication networks that, although owned, leased, or operated by military organizations, have no security or technical features other than those found in ordinary commercial communications networks. However, BIS believes that the information security assurance systems described in USML Category XIII(b) are not the only features that distinguish a network that performs military functions from one that performs only routine administrative or civilian communications functions. To draw the proper distinction, this final rule replaces the term “specially designed for military use” in ECCN 3A611 with the phrase “specially designed for military application.” BIS believes that the latter phrase addresses the commenter’s concerns by emphasizing that ECCN 3A611.a does not apply to electronic “equipment,” “end items” and “systems” merely because the military uses them. Rather, the commodity must be “specially designed” to perform a military function or activity. This change is consistent with the long-standing policy in the ITAR that the mere use of an item should not determine its jurisdictional or control status. See 22 CFR § 120.3.

Comment 14:

One commenter recommended changing “a” to “another” in the phrase “not enumerated in any USML category or controlled by a ‘600 series’ ECCN” that appears in the note immediately following ECCN 3A611.a.

Response 14:

BIS agrees that the recommended change more precisely states the scope of ECCN 3A611.a; therefore, this final rule adopts that change.

*Comments applicable to ECCN 3A611.c or .d.*

Comment 15:

One commenter stated that the definition of output power is inconsistent among ECCNs that control microwave transistors. ECCN 3A001 uses “average output power;” 3A982 uses both “average output power” and “pulsed output power;” and 3A611 uses “saturated power.” The commenter asserted that this variation will create confusion and inconsistent results.

Response 15:

After the comment period for the July 25 (military electronics) rule closed, changes to the Wassenaar Arrangement’s Dual Use List, Category 3 were adopted at its December 2013 plenary meeting. Those changes included new criteria for paragraphs 3.A.1.b.2 (MMIC power amplifiers) and 3.A.1.b.3 (discrete microwave transistors). The changes eliminated the need for ECCN 3A982 by expanding the operating frequency ranges in paragraphs 3.A.1.b.2 and 3.A.1.b.3 to include the operating frequency ranges currently found in the ECCN 3A982. This change made the MMIC power amplifiers and discrete microwave transistors currently controlled under ECCN 3A982 eligible for inclusion in ECCN 3A001, which is based on Wassenaar Arrangement Dual Use List paragraph 3.A.1. The Wassenaar Arrangement Dual Use List changes also revised the criteria for inclusion of MMIC power amplifiers and discrete microwave transistors in 3.A.1.b.2 and 3.A.1.b.3. Those changes, which will eliminate inconsistencies in the definitions of output power, will be incorporated into ECCN 3A001.b.2 and .b.3 by the rule implementing the Wassenaar Arrangement 2013 plenary meeting decisions, which BIS expects will be published and become effective before this final rule becomes effective. This final rule will then build on the changes made by the Wassenaar 2013 plenary meeting rule by creating ECCN

3A611 and moving some MMIC power amplifiers and discrete microwave transistors from 3A001.b.2 and .b.3 to 3A611.c and .d based on the values for power added efficiency, fractional bandwidth, or peak saturated power output (or some combination thereof).

Comment 16:

One commenter noted that the frequency range from 2.7 GHz – 2.9 GHz is internationally recognized as a standard band for civilian air traffic control (ATC) systems. Regulating devices in this band has the effect of limiting U.S. participation in the global civil ATC market, and providing an unfair advantage to our worldwide competitors, as well as an incentive for our foreign competitors to invest in developing their own amplifier technology. This particular frequency band is predominantly used for civil ATC rather than military applications. In addition, the international ATC band is under consideration to be expanded upwards to 3.2 GHz, due to conflicts with civil communications in the lower end of the band.

Response 16:

BIS' implementation of the decisions of the Wassenaar Arrangement December 2013 plenary meeting, noted in Response 15, will, when published in the EAR revise ECCN 3A001.b.2 (MMIC power amplifiers) and b.3 (discrete microwave transistors) to encompass the frequency range noted in this comment. The additional technical parameters of power added efficiency, fractional bandwidth and peak saturated power output determine whether MMIC power amplifiers are controlled in ECCN 3A611.c. The additional technical parameters of power added efficiency and peak saturated power output determine whether discrete microwave transistors are controlled in ECCN 3A611.d. The EAR control over these devices are based on the

multinational Wassenaar Arrangement, under which other member states should implement similar export controls, reducing any disadvantage faced by U.S. companies.

Comment 17:

Several commenters stated that the parameters in ECCN 3A611.c and .d would cover MMIC power amplifiers and discrete microwave transistors that have civil applications now, or that are likely to have important civil applications in the near future. The civil applications mentioned were Wi Fi, Wi Max, point-to-point radios for cellular backhaul, Commercial Ka-band used in commercial satellite based wireless internet ground stations and V-Band radios used in small commercial cellular networks. The specific points raised by these are as follows.

The differences between devices that would be controlled by ECCN 3A611.c or .d and those that are controlled by ECCN 3A001.b.2 or .b.3 in many instances are only a matter of efficiency. Because increasing efficiency is driving development in both civil and military applications, higher efficiency is not a good criterion for distinguishing military from civil applications. Increasing efficiency, saturated power and bandwidth are common objectives in both military and civil applications. In commercial cellular base stations, high power efficient devices enable achieving necessary power levels without combining multiple lower power devices, thereby simplifying manufacturing, lowering costs and producing more efficient transmitter design. Increasing bandwidth is needed to handle greater data volume in commercial networks, and OEMs are requiring vendors of semiconductor power devices to supply it for increased system capability and inventory management reasons. The performance levels in proposed ECCN 3A611.c and .d do not lead to a valid conclusion that a device is inherently military or that it is unlikely to be used in a commercial application.

The frequency range from 3.1 – 3.5 GHz is not restricted to military use. The International Telecommunication Union (ITU) designates this band for radio location, and the band is also in active use internationally as an additional civilian air traffic control (ATC) band. Today's transistors for air traffic control can exhibit efficiencies, which commonly exceed 60%. The commenter cited one example of a transistor that it stated achieved such efficiency exceeding 60%.

One commenter stated that proposed ECCN 3A611.c.9, .c.10 and .c.11 overlap with ECCN 3A001.b.2.e, .b.2.f and .b.2.g as set forth in the Wassenaar Arrangement implementation rule published in June 2013. The commenter noted that the three 3A611 paragraphs differ from the corresponding 3A001 paragraphs in that the former specify values for peak saturated output power whereas the latter specify values for average output power instead and only the former specify a value for power added efficiency. In addition, proposed 3A611.c.9 specifies a value of fractional bandwidth whereas 3A001.b.2.e does not. This commenter stated that, although its current products do not meet the threshold values for inclusion in 3A611, only a small amount of advancement would be needed for its products to do so. The commenter recommended the following changes to ECCN 3A611 to provide a reasonable allowance for improvements of commercial amplifiers. In paragraph .c.9, increase the peak saturated output power from 1 W to 3 W and the power added efficiency from 15% to 35%. In paragraph .c.10, increase the peak saturated output power from 31.62 mW to 100 mW and the power added efficiency from 25% to 35%. In paragraph .c.11, increase the peak saturated output power from 10 mW to 100 mW and the power added efficiency from 10% to 20%.

One commenter reiterated its comment made in response to the November 28 (military electronics) rule that most gallium nitride (“GaN”) MMICs and discrete transistors currently available on the commercial market (and classified as ECCN 3A982 or 3A001 or designated EAR99) perform at levels that exceed even the revised proposed power added efficiency thresholds for ECCN 3A611. Accordingly, that metric, as currently proposed, still does not sufficiently focus the proposed regulation on high performance parts. Rather, most GaN MMICs and discrete transistors that presently are used in commercial telecommunications, backhaul, point-to-point and satellite applications would still meet the proposed thresholds under ECCN 3A611.

The commenter reiterated its request for BIS to consider the power added efficiency thresholds set forth in its earlier comment, which it stated reflect the realities of the commercial market.

One commenter recommended adding the phrase “specially designed for military use” to paragraphs .c and .d. The commenter stated that without this change, the paragraphs would cover MMICs and transistors that currently are classified in ECCNs 3A001 and 3A982 or those that currently designated EAR99. The order of review in Supplement No. 4 to Part 774 would cause ECCN 3A611 to prevail over the others. The commenter states that it is aware of a large number of circuits and transistors that have been classified under ECCN 3A001 that would be classified under 3A611.c or .d causing a large number of commercial products that have already been exported on the global market to be controlled by ECCN 3A611.

Response 18:

Experts in this area from the Departments of Defense, State, and Commerce reviewed the parameters proposed in ECCN 3A611.c (MMIC power amplifiers) and .d (discrete microwave

transistors). The conclusion of that review was that, in most instances, the civil market for these devices at the parameters set forth in the proposed rule is minimal to non-existent. However, the reviewers concluded existing civil applications justify raising the power added efficiency in four instances. Accordingly, in this final rule, for the operating frequency range exceeding 2.7 GHz up to and including 2.9 GHz, the power added efficiency threshold has been raised to 55% for MMIC power amplifiers and to 60% for discrete microwave transistors from a proposed threshold of 50% for both. In the operating frequency range exceeding 2.9 GHz up to and including 3.2 GHz, the power added efficiency threshold has been raised to 55% for MMIC power amplifiers and to 60% for discrete microwave transistors from proposed thresholds of 45% for MMIC power amplifiers and 50% for discrete microwave transistors. Although more efficient and powerful MMIC power amplifiers and discrete microwave transistors may have widespread use in civil communications in the future, this rule is based on conditions as they exist at the time the rule is being written. Like any other aspect of the EAR, ECCN 3A611 paragraphs .c and .d may be modified in the future if changes in civil and military applications and concerns warrant a change.

As noted in Response 15, BIS intends to publish a rule implementing the decisions of the Wassenaar Arrangement December 2013 plenary meeting. That rule will revise ECCN 3A001.b.2 (MMIC power amplifiers) and b.3 (discrete microwave transistors) to encompass the frequency ranges used in ECCN 3A611.c and .d. The additional technical parameters of power added efficiency, fractional bandwidth and peak saturated power output will determine whether MMIC power amplifiers are controlled in ECCN 3A611.c. The additional technical parameters of power added efficiency and peak saturated power output determine whether discrete microwave transistors are controlled in ECCN 3A611.d. That rule also will remove ECCN

3A982. Thus, none of the MMIC power amplifiers or discrete microwave transistors that this final rule controls under ECCN 3A611 will be EAR99 at the time this final rule becomes effective, and therefore, no changes are being made to this rule. The EAR control over these devices is based on the multinational Wassenaar Arrangement, under which other member states should implement similar export controls, reducing any disadvantage faced by U.S.-based producers of these products.

Comment 19:

One commenter stated that the broadband proposed language for each frequency range, in the definition of the broadband behavior, regulates devices that operate far below that range and whose center frequency is below the performance limits of 3A001 and 3A982 ( $<2.7$  GHz). For example, a MMIC with a 60% bandwidth which operates to 2.7 GHz would have a center frequency of  $\sim 2$  GHz and a lower operating frequency of 1.45 GHz.

Response 19:

The commenter's observation is correct. However, the ability of a MMIC power amplifier or discrete transistor to operate within a frequency band specified in, and meet the other control parameters of, a particular ECCN items paragraph give it the capabilities that warrant export license requirements, even if it can also operate outside that frequency band or at lower performance parameters.

Comment 20:

One commenter stated that cycle times for commercial technology innovation can be shorter than that for military technology innovation. The development of state-of-the-art power amplifier



devices for civil communications systems is driven by the ever increasing quantity of information transmitted over wireless networks. Higher quality network data links coupled with longer distances between cellular backhaul radios is yet an additional driver for increasing power requirements. Operation across broader frequency ranges coupled with OEMs' demand to stock fewer parts generates an industry demand for broadband power amplifiers.

Response 20:

BIS recognizes that performance of civil communications networks increases over time and that the increased performance requires more capable components. However, the technical personnel from the Departments of Defense, State, and Commerce attempted to set the parameters for the MMIC power amplifiers and discrete microwave transistors controlled by ECCN 3A611 to cover those with important military applications and few or no *current* civil applications. BIS is willing regularly to accept and consider information from interested persons about developments that would result in such items being used in non-military, commercial applications.

Comment 21:

One commenter recommended deleting ECCN 3A611.c and .d, stating that there is no publicly available evidence that either MMIC power amplifiers or discrete microwave transistors are now subject to DDTC licensing authority. The commenter recapitulated text currently in USML Category XI(a) and (b) and the "Related Controls" paragraph of ECCN 3A001 in support of this contention. The commenter noted the description of both MMIC power amplifiers and discrete microwave transistors in ECCN 3A001 and noted that the preamble to the July 25 (military electronics) rule referred to a United States proposal to modify language related to such amplifiers and transistors in the Wassenaar Arrangement Dual Use List. The commenter noted

that ECCN 3A001 license requirements applicable to MMIC power amplifiers and discrete microwave transistors apply to fewer destinations than would the requirements in proposed ECCN 3A611.c and .d. The commenter also noted a broader range of license exceptions available under ECCN 3A001 than under 3A611, especially for MMIC power amplifiers. The commenter asserted that, to include these two items in 3A611, BIS would first need to transfer licensing jurisdiction to the Directorate of Defense Trade Controls.

Response 21:

BIS is making no changes to the rule in response to this comment. The parameters for MMIC power amplifiers and discrete microwave transistors included in 3A611 will differ from those in ECCN 3A001.b.2 and .b.3 (as to be revised by the yet-to-be published final rule implementing the decisions of the Wassenaar Arrangement December 2013 plenary meeting) based on their power added efficiency, peak saturated power output, fractional bandwidth or some combination of those parameters. BIS believes that the values selected in this final rule are adequate for readers to readily distinguish the MMIC power amplifiers and discrete transistors in ECCN 3A611.c and .d from those in ECCN 3A001.b.2 and .b.3. BIS is unaware of any commodity jurisdiction determinations issued by the State Department that the MMICs described in the new “600 series” controls were not previously subject to the jurisdiction of the ITAR.

Comment 22:

One commenter noted that ECCN 3A982 controls packaged transistors and packaged MMICs but does not control unpackaged devices or bare die. Therefore, unpackaged devices and bare die that meet the frequency and power parameters of ECCN 3A982 but not that of ECCN

3A001.b.2 or .b.3 are designated EAR99. Thus, as proposed, 3A611 would impose controls on devices that are currently designated EAR99.

Response 22:

BIS notes that this comment was made prior to the Wassenaar Arrangement December 2013 plenary meeting that, *inter alia*, revised the Wassenaar Arrangement Dual Use List Category 3.A.1 to include coverage of MMIC power amplifiers and discrete microwave transistors with operating frequencies exceeding 2.7 GHz. When published, the rule implementing that change on the CCL will provide the same frequency thresholds for ECCN 3A001.b.2 and .b.3. It will also remove ECCN 3A982 from the CCL because the devices listed therein will then be within the scope of ECCN 3A001.b.2 and .b.3. Neither the Wassenaar Arrangement Dual Use List Category 3.A.1.b.2 and .3 nor ECCN 3A001.b.2 and .b.3 are currently limited to packaged devices. ECCN 3A611.c and .d are based on the parameters of Wassenaar Arrangement Dual Use List Category 3.A.1.b.2 and .3 that BIS intends to add to ECCN 3A001.b.2 and .b.3 with additional parameters of power added efficiency, peak saturated power output and fractional bandwidth to differentiate the devices in ECCN 3A001.b.2 and .b.3 from those in ECCN 3A611.c and .d. Thus, although some of the devices covered in ECCN 3A611 may have been designated EAR99 at the time the comment was made, by the time this final rule is effective, they will be on the CCL in conformance with the United States' Wassenaar Arrangement commitment. Therefore BIS is making no changes to the rule in response to this comment.

*Comments concerning ECCN 3A611.e -- Certain high frequency surface wave radar.*

Comment 23:

One commenter stated that the seemingly technical descriptions in proposed USML Category XI(a)(3)(i) and proposed ECCN 3A611.e cover virtually all airborne and maritime radar. A primary purpose of ship-borne radar is traffic control. The commenter cited his experience as a U.S. Navy-trained radar officer from 1943 to 1946 in which he “learned that the fundamental purpose of both military and civil radar is as described in [proposed USML Category] XI(a)(3)(i) and [proposed ECCN] 3A611.e.”

The commenter also stated that the Note to 3A611.e would unintentionally decontrol much of what 3A611.e would control. “Specially designed” in that Note does not effectively narrow the scope of its decontrol. The words “achieve or exceed” in (a)(1) of the definition of “specially designed” logically narrow only controls, not decontrols. The lack of any such Note to XI(a)(3)(i) would not only transfer much of 6A008 and 6A108 to the USML but also would transfer from EAR99 to the USML much of what is excluded from 6A008 in technical decontrol Notes.

Response 23:

BIS does not agree with the commenter that the technical description in 3A611.e would cover virtually all airborne or maritime radar. Paragraph .e -- “High frequency (HF) surface wave radar that maintains the positional state of maritime surface or low altitude airborne objects of interest in a received radar signal through time” -- describes specific radar capabilities that have distinct military applications and that are not found in most civil radars. HF radar manufactured

for only maritime traffic control would be designed with performance limitations that would limit the military utility.

BIS also does not agree that the note, which makes clear that paragraph .a does not apply to radars that are “specially designed” for marine traffic control, would exclude all radars that would otherwise be covered by paragraph .e. The text of paragraph .e describes capabilities that would not likely be needed in a maritime traffic control system. BIS also disagrees with the commenter’s opinion that “specially designed” cannot apply to a decontrol. In this instance, the note excludes radars that as a result of “development” have properties that are peculiarly responsible for achieving a maritime traffic control system performance, a very different thing than the kinds of radars controlled by 3A611.e. BIS does not agree with the commenter’s assertion that a note to proposed USML Category XI(a)(3)(i) is needed to prevent transfer of some radars from the CCL to the USML.

*Comments concerning ECCN 3A611.f – Application specific integrated circuits and programmable logic devices programmed for “600 series” items.*

Comment 24:

One commenter recommended changing the phrase “600 series” in ECCN 3A611.f, .g, and .h to read “a characteristic in the text of a description of a “600 series” ECCN” and deleting the phrase “specially designed” from ECCN 3A611.g and .h.

Response 24:

BIS is not making the changes suggested by the commenter. ECCN 3A611 paragraphs .f, .g and .h control, respectively, application specific integrated circuits and programmable logic devices programmed for “600 series” items, printed circuit boards and populated circuit cards with layouts “specially designed” for “600 series” items, and multichip modules with a pattern that is “specially designed” for “600 series” items. Changing the phrase “600 series” to “a characteristic in the text of a description of a “600 series ECCN” would add to the text length and complexity, but neither accuracy nor clarity. The phrase “specially designed” is needed in paragraphs .g and .h so that those paragraphs do not inadvertently apply to printed circuit boards and populated circuit cards with layouts and to multichip modules with patterns that are common to “600 series” items and items in other ECCNs or to EAR99 items.

*Comments concerning ECCN 3A611.g – Multichip modules for which the pattern or layout is “specially designed” for “600 series” items.*

Comment 25:

One commenter noted that the July 25 (military electronics) rule proposed to regulate printed circuit boards and populated circuit card assemblies “specially designed” for “600 series” items under ECCN 3A611.g, and multichip modules similarly under ECCN 3A611.h.

The commenter stated that when these items are used in items controlled by a “.y” paragraph, they are inherently non-significant and should either be released by paragraph (b)(3)(ii) of the “specially designed” definition, or themselves controlled by the “.y” paragraph. A similar approach may be suitable for application-specific integrated circuits and programmable logic devices proposed for ECCN 3A611.f.

Response 25:

To the extent that the layout or pattern of a device listed in ECCN 3A611.f, .g or .h is “specially designed” for an item listed in the .y paragraph of a “600 series” ECCN, BIS agrees with the commenter that the device should be controlled to the same extent as the device of which it is a “specially designed” part or component. Accordingly, this final rule addresses the commenter’s concerns by adding text to paragraphs .f, .g and .h referring reader to paragraph .y of ECCN 3A611 for such devices and adds text controlling such devices to ECCN 3A611.y.

*Comments concerning ECCN 3A611.y.*

Comment 26:

One commenter stated that its connectors that currently are classified under USML Category XI(c) would transfer to 3A611.y.3. The commenter noted that the problem with the 3A611.y text is that it states that it is “for a commodity subject to control in this entry and not elsewhere specified in any “600 series” ECCN.” Thus, an electrical connector that is “specially designed” for military aircraft equipment currently under USML Category VIII, would be classified under ECCN 9A610.x.

Response 26:

In this final rule, ECCN 3A611.y applies to parts, components, accessories and attachments that are “specially designed” for a commodity subject to control in a “600 series” ECCN and not elsewhere specified in any “600 series” ECCN, and includes in its list of commodities electrical connectors. Thus, if the connectors in fact are moved from the USML to the CCL and are not “specified in another “600 series” ECCN,” they are controlled by ECCN 3A611.y.

Comment 27:

One commenter stated that under the current wording, [of 3A611.y and .x] 3A611.y items would be restricted exclusively to items “specially designed for a commodity subject to control in this entry and not elsewhere specified in any “600 series” ECCN.” This means, by way of example, the commenter asserted that a "speaker" (y.19) “specially designed” for a USML item would necessarily be classified as a 3A611.x item, despite the positive enumeration of “speakers” within 3A611.y and the clear intent that .y items are intended to constitute a positive list of “specially designed” items which warrant no more than AT-only controls, whether "specially designed" for ECCN 3X600 series items or USML items.

The commenter recommends fixing this by revising paragraphs .x and .y to exclude items elsewhere specified on the USML or CCL and by revising paragraph .y to apply to specific “parts,” “components,” “accessories” and “attachments” “specially designed” for a commodity subject to control in this entry or for an article controlled by USML Category XI.

Response 27:

BIS believes that no ambiguity exists between the scope of paragraphs .x and .y. The commenter’s proposed solution would undermine the order of review set forth in Supplement No. 4 to part 774 of the EAR. However, BIS makes changes to this final rule to address the concern of the commenter. In this final rule, BIS makes paragraph .y applicable to commodities listed therein if they are “specially designed” for a commodity in *any* “600 series” ECCN or



USML defense article and adds text to paragraph .x that explicitly excludes commodities in paragraph .y from the control of .x.

*Comment concerning ECCN 3B611.*

Comment 28:

One commenter expressed support for the proposal in the State and Commerce July 25 (military electronics) rules to transfer to the CCL under ECCN 3B611 all “Test, Inspection and Production Equipment for Military Electronics” that is not explicitly enumerated in the revised USML Category XI. The commenter expressed a belief that this proposal recognizes an important technical difference and implements an equally important policy differentiation between test equipment and operational military equipment.

Response 28:

BIS acknowledges the comment.

*Comments concerning ECCN 3D611.*

Comment 29:

One commenter recommended changing “specially designed” to “required” in the heading and in paragraphs .a, .b, .y of ECCN 3D611 for consistency with EAR definition of “required.” This commenter also recommended changing “commodities” to “items” 3D611.a and adding “or 3D611” to comply with WAML category 21.a. Finally, this commenter recommended adding new 3D611.c “software” not enumerated in the USML or otherwise enumerated in the CCL

performing the military functions of equipment enumerated in USML Category XI or 3A611 to comply with WAML category 21.c.

Response 29:

BIS is making no changes to the rule in response to this comment. Although the definition of “required” in the EAR can apply to software, nothing in that definition requires that the word be used in all ECCNs that control software. The definition is very similar to paragraph (a)(1) of the definition of specially designed. In this instance the term “specially designed” tailors the ECCN text more closely to BIS’s objective of not including dual-use software in a “600 series” ECCN.

BIS does not agree with this commenter’s interpretation of WAML category ML21. BIS believes that the phrase “specified by the Munitions List” in category ML21 refers to categories on the WAML that cover equipment, materials or related software, not to WAML category ML21 itself, which applies to software generally. WAML category ML11 applies to military electronic equipment not specified elsewhere on the WAML, which, in this rule, is covered by ECCN 3A611. ECCN 3D611 applies to software for that equipment, thereby implementing the scope of WAML category ML21 as it applies to software for military electronics. Because ECCN 3A611 controls commodities as that term is defined in the EAR, describing the software controlled by ECCN 3D611 as being for commodities controlled by ECCN 3A611 is appropriate.

*Comment concerning ECCN 3E611.*

Comment 30:

One commenter noted that discrete items on a network that are classified as 4x994, 5x001, 5x002, 5x991 and EAR99 sometimes require maintenance, repair or replacement. Proposed

3E611 would control “operation, installation, maintenance, and repair of ‘commodities’ controlled by ECCN 3A611.” In the case of a system classified as ECCN 3A611, the proposed ECCN is ambiguous as to whether, for example, the maintenance and repair of an end-item such as a switch classified as ECCN 5A002 would be controlled by ECCN 3E611.

The commenter recommended eliminating the ambiguity by adding a note to ECCN 3E611 to read as follows: “ECCN 3E611.a does not control the operation, installation, maintenance, or repair of non-‘600 series’ items that are or are intended to be included in ‘systems’ controlled by ECCN 3A611.a.”

Response 30:

ECCN 3E611.a controls “technology” (other than that described in 3E611.b or 3E611.y) “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software controlled by ECCN 3A611, 3B611 or 3D611. It does not control other technology that is not so “required,” even if that other technology is being used to service a network that contains devices or software controlled by ECCN 3A611, 3B611 or 3D611, nor does it control such other technology that is used to service the commodities or software controlled by 3A611, 3B611 or 3D611. However, ECCN 3E611 does control technology that is so “required,” even if that technology is being used to service something else. Given the military nature of “600 series” technology, BIS believes that this level of control must be maintained. Accordingly, BIS is making no changes to the final rule in response to this comment.

Comment 31:

One commenter recommended changing the phrase found in 3E611.a “other than that described in 3E611.b or 3E611.y” to read “not controlled by 3E611.b or 3E611.y.” This same commenter also recommended deleting 3E611.b because, he asserted, with the above change in 3E611.a, 3E611.b would be covered by 3E611.a.

Response 31:

This final rule adopts the commenter’s recommendation in part. The proposed rule text “other than that described in 3E611.b or 3E611.y” is revised to read “other than that controlled by 3E611.b or 3E611.y.” The revised text for 3E611.a more closely follows the text generally used in ECCNs and, being a familiar phrasing, is less likely to be misunderstood. However, BIS does not agree that the change brings ECCN 3E611.b within the scope of 3E611.a. Paragraph .b controls technology for four specific commodities. Without the specific listing in paragraph .b and a related exclusion in paragraph .a, that technology would be controlled under the broader general language of paragraph .a. The purpose of paragraph .b in ECCN 3E611 is to delineate technology types for which License Exception STA may be used only for “build-to-print” technology, a limitation that does not apply to paragraph .a. Placing these items in a separate paragraph allows for simpler language in paragraph .a and, BIS believes, will make the scope of the STA limitation more readily discernible to readers.

Comment 32:

One commenter recommended that BIS add a new 3E611.c: “Technology” “required” for the design of, the assembly of components into, and the operation, maintenance, and repair of complete production installations for items specified by the U.S. Munitions List or “600 series” ECCNs. The commenter’s proposed paragraph .c would apply even if the components of such production installations are not specified. The commenter stated that this proposal is necessary to comply with WAML category 22.b.1.

Response 32:

The product group “E” “600 series” ECCNs provide controls consistent with the United States commitment as a Wassenaar Arrangement member state for the commodities and software that are in the related “600 series” ECCNs (*e.g.*, 3E611 controls technology for commodities and software in other ECCNs that end in 611). An additional control on all such technology is not needed and could cause confusion about where on the CCL a particular technology is controlled. Therefore this final rule does not adopt the changes recommended in this comment.

*Comments concerning definitions.*

Comment 33:

One commenter recommended adding definitions for “form,” “fit” and “function” to § 772.1 of the EAR.

Response 33:

These three terms are defined for purposes of the definition of the term “specially designed” within the text of that definition in § 772.1 of the EAR. That definition became effective on October 15, 2013, after the comment period on the July 25 (military electronics) rule closed on September 9, 2013. Therefore, BIS makes no changes to the EAR in response to this comment.

Comment 34:

One commenter stated that the “Digital Computer” definition currently applies to Categories 4 and 5 and that BIS now needs to add Category 3 to that definition.

Response 34:

ECCN 3A611.a, which is being created by this rule, includes, *inter alia*, the phrase “. . . computer equipment, end items, or systems “specially designed” for military use . . . .” However, the term “digital computer” is not used in 3A611, nor does it appear in the text of this final rule or elsewhere in CCL Category 3. Therefore, this final rule does not add a reference to Category 3 to the definition of digital computer in § 772.1 of the EAR.

Comment 35:

One commenter recommended harmonizing the definition of “export” in the ITAR and EAR. This commenter expressed the opinion that the EAR is less restrictive than the ITAR with respect to sending equipment into international waters temporarily because it defines “export” differently than does the ITAR.

Response 35:

The change suggested in this comment is outside the scope of the July 25 (military electronics) rule and is, therefore, not adopted in this final rule. Nevertheless, harmonizing definitions in the ITAR and the EAR remains one of the Administration's goals in the Export Control Reform Initiative. BIS and the other government bodies involved in that initiative continue to review the possibility of harmonizing this definition.

Comment 36:

One commenter asked that BIS clarify whether paragraph (b)(3)(ii) of the "specially designed" definition releases .y items. Paragraph (b)(3)(iii) releases items used in or with an item that is either not enumerated on the CCL or USML *or* in an ECCN controlled only for AT reasons. The commenter stated that the .y paragraphs are controlled for AT *and* China military end use (744.21) *and* the *de minimis* restriction for foreign articles containing items that are in "600 series" ECCNs.

Response 36:

To be excluded from the definition of "specially designed" under paragraph, (b)(3)(ii), the item either must be controlled in an ECCN in which the only reason for control is antiterrorism or must be controlled in an ECCN that Note 1 to the definition of "specially designed" identifies as an ECCN that is treated as such for the purposes of the definition. The .y paragraphs do not meet either of those standards and, thus, are not excluded from the definition of "specially designed."

Comment 37:

One commenter requested that BIS clarify use of the phrase "for use in or with a commodity or defense article enumerated or otherwise described on the CCL or the USML" in paragraph (a)(2)

of the “specially designed” definition. The commenter stated that BIS and DDTC personnel have described this phrase as meaning “one level up” in a hierarchical design structure. For example, a part might be incorporated into a component, which is further incorporated into an end item. The commenter indicated that in determining whether the part was within the scope of specially designed, one would need to look only at the component into which the part would be incorporated, not the end item into which the component would be incorporated. The commenter suggested that this practice would not be appropriate for sensitive military items because (in this example) the part might be peculiarly responsible for achieving the performance levels of the end item. Moreover, the commenter stated that unscrupulous manufacturers could insert artificial non-enumerated levels into a hierarchal design for the purpose of decontrolling a sensitive item.

Response 37:

After some review, BIS concludes that no change to this final rule is needed in response to this comment. A part that is “peculiarly responsible for achieving or exceeding the performance levels, characteristics or functions in the . . . ECCN or the U.S. Munitions List (USML) paragraph” that controls the end item would, according to paragraph (a)(1) of the definition, be “specially designed” for that end item unless released by paragraph (b). Paragraphs (b)(1) and (b)(2), if applicable, would release the part regardless of the level of the component into which it was installed. Paragraph (b)(3) releases parts because they are in fact used in or with an item that is in production and is either EAR99 or in an ECCN controlled only for antiterrorism reasons. Release of parts that are *in fact* so used is appropriate regardless of whether the item in production is an end item or an intermediate part or component because of the actual use in a civil product or the actual intent at the design stage not to design the item for a military application. Paragraphs (b)(4), (b)(5) and (b)(6) release items based on documented design



intent. Release of a part from the definition is appropriate if the actual documented design intent applicable to that part meets the criteria set forth in one of those paragraphs regardless of the nature of the end item that the part is used in or with. Merely creating an artificial non-enumerated [on the CCL] level in design documents in an attempt to decontrol a part or component would not satisfy the criteria for release from the definition of “specially designed” because such documents would not reflect actual use or actual design intent. Moreover, such an attempt would likely be an attempt to evade a requirement of the EAR and possibly a violation of other laws as well.

Comment 38:

One commenter recommended that both the ITAR and the EAR adopt the JEDEC [Joint Electron Device Engineering Council] definition of the term “application specific integrated circuit (ASIC),” i.e., “an integrated circuit developed and produced for a specific application or function and for a single customer.” The commenter stated that “[d]oing so will utilize existing industry terminology and, accordingly, will provide exporters with a clear basis upon which to classify an integrated circuit.”

Response 38:

Although BIS believes that a definition would add clarity, it is concerned that the definition that the commenter recommends could result in the unwarranted removal of ASICs from ECCN 3A611 that are specific to a “600 series” commodity merely because a second customer purchases the circuit. Because of these concerns, BIS is not adopting the commenter’s definition

for the term “application specific integrated circuit (ASIC).” However, to enhance clarity, this final rule includes text in ECCN 3A611 describing application specific integrated circuits as “integrated circuits developed and produced for a specific application or function regardless of the number of customers.”

*Comments concerning commodity jurisdiction decisions.*

Comment 39:

Three commenters addressed the effect of the Department of State commodity jurisdiction determinations (CJs) that designated an item as subject to the EAR prior to the effective date of this rule. One commenter recommended that the definition of “specially designed” be revised to state either that CJs take precedence over the new rules or that a CJ request needs to be resubmitted if it does not explicitly address parameters in the new rules. One commenter stated that the text of paragraph (b)(1) of the “specially designed” definition differs from the text of General Order No. 5. The commenter pointed out that some CJs did not provide an ECCN, but simply stated that an item was not subject to the USML. This commenter asserted that an item with such a CJ and not listed in an “018” ECCN would not be in the “600 series” by General Order No. 5, but would not be released by paragraph (b)(1) in the “specially designed” definition. A third commenter recommended adding a note to General Order No. 5 to read “Note 1: ‘Enumerated’ refers to any item (i) on either the USML or CCL not controlled in a ‘catch-all’ paragraph and (ii) when on the CCL, controlled by an ECCN for more than Anti-Terrorism (AT) reasons only.” This commenter stated that “with the implementation of 3A611.x, a series 600 “specially designed” catch-all paragraph, commodities previously self-determined to be EAR99 may be controlled under 3A611.x as a result of the product’s original design intent.” The

commenter stated that it had received “a class commodity jurisdiction that determined a product is subject to the EAR when the commodity fails to meet or exceed the minimum performance levels for control under the ITAR.” The commenter then classified the commodities as EAR99 “because the commodities are not positively controlled in the CCL.”

Response 39:

BIS believes that no change to the wording of either General Order No. 5 or the “specially designed” definition is needed to address the concerns of these commenters. Paragraph (c) of General Order No. 5 reads:

*Prior commodity jurisdiction determinations.* If the U.S. State Department has previously determined that an item is not subject to the jurisdiction of the ITAR and the item was *not listed in a then existing “018” series ECCN*, then the item is per se not within the scope of a “600 series” ECCN. If the item was not listed elsewhere on the CCL *at the time of such determination* (i.e., the item was designated EAR99), the item shall remain designated as EAR99 unless *specifically enumerated* by BIS or DDTC in an amendment to the CCL or to the USML, respectively. (Emphasis added.)

The question of whether the item was listed in a “018” series ECCN that existed at the time of the determination or whether it was listed on the CCL at all at the time of the determination is a question of fact. It is not a question of whether CJs take precedence over recent amendments to

the EAR. Paragraph (c) applies to determinations by the State Department “*that an item is not subject to the jurisdiction of the ITAR.*” It does not require that the State Department determine that the item is EAR99 for the paragraph to be applicable. The phrase “such determination” in the second sentence refers to the State Department’s determination that the item was not subject to the ITAR. Items subject to such determinations that were not in a “018” series at the time of that State Department determination do not become “600 series” items as a result of this rule. Items subject to such determinations that became EAR99 because they were not on the CCL at all at the time of the State Department determination do not lose their EAR99 status unless subsequently “specifically enumerated” in an amendment to the CCL or USML. The .x paragraphs of the ECCNs in this rule are “catch all” paragraphs that do not specifically enumerate the items that they control. There is no need to resubmit CJ requests to determine whether the criteria in paragraph (c) of General Order No. 5 are met.

*Comment concerning license exceptions.*

Comment 40:

One commenter expressed concern about what it termed “the proposed prohibition on the use of the STA Exception for this Category [ECCN 3A611].” The commenter suggested a modification to the STA paragraph in 3A611 that it said would allow for control by DOC of the applicability of the exception. Under the commenter’s suggested language, the STA paragraph in ECCN 3A611 would read as follows: “Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 3A611, unless determined by BIS to be eligible for License Exception STA in accordance with § 740.20(g) (License Exception STA eligibility requests for “600 series” end items).”

Response 40:

BIS believes that the commenter is misreading the STA paragraph in ECCN 3A611. That paragraph precludes use of paragraph (c)(2) of License Exception STA; it does not preclude the use of paragraph (c)(1). Paragraph (c)(1) authorizes the use of License Exception STA to the 36 destinations in Country Group A:5. Paragraph (c)(2) authorizes limited use of License Exception STA to send certain items to the eight destinations listed in Country Group A:6 if the only reason for control that applies to the transaction is national security. No “600 series” items are eligible to be exported to destinations in Country Group A:6 under License Exception STA, a policy that has been followed consistently in all rules creating “600 series” ECCNs. Accordingly, BIS is making no changes to the rule in response to this comment.

*Comment concerning recordkeeping.*

Comment 41:

One commenter stated that BIS takes the view that EAR recordkeeping requirements apply to all transactions described in § 762.1 of the EAR, including those transactions that are completed without a license, under a License Exception, or pursuant to an individual license issued by BIS. The commenter stated that recording intangible technology transfers that do not require a license may have made sense when fewer methods of making such transfers existed. However, the commenter asserts that the same recordkeeping requirement for intangible transfers of NLR technology now applies to email, individual phones, VOIP and teleconferences. Large companies with multinational operations can generate thousands of records annually. The benefit of not requiring a license is largely negated by this recordkeeping requirement, with no obvious

corresponding benefit to national security. This also seems to contradict the goals of Export Control Reform – previously licensed technology will become NLR, but records of unlicensed, intangible transfers still need to be kept.

The commenter suggested that BIS review the value of industry maintaining records of transfers of technologies for which no license is required. BIS might be guided by its approach to EAR §732.5(b), which states that exports from the United States of items on the CCL that are designated EAR99 generally do not require a Destination Control Statement, even though such items are “subject to the EAR.” Similar flexibility in interpreting what is subject to the EAR could be usefully applied to NLR recordkeeping.

#### Response 41

BIS is not making any changes to the EAR recordkeeping requirements in response to this comment because such changes would be outside the scope of the changes proposed in the July 25 (military electronics) rule. However, BIS is planning to undertake a comprehensive review of its recordkeeping requirements, including seeking public comment on those requirements in the near future.

*Comment concerning conflict between the EAR and the ITAR.*

#### Comment 42:

One commenter recommended that BIS “revise [ECCN] 2A984 parameters to de-conflict with the parameters included in the [USML] Category XI(a)(10). As written [in the July 25 Department of State Military Electronics Rule], Category XI(a)(10) identifies electronic sensor systems or equipment for detection of concealed weapons having a standoff detection range of

greater than 45 meters this conflicts with [current ECCN] 2A984 entry for concealed object detection equipment which includes a standoff distance of 100 meters.” (Emphasis in original).

Response 42:

This comment was also made in connection with the State July 25 (military electronics) rule. The Department of State’s final rule includes language in Category XI(a)(10) that excludes sensor systems that meet the technical parameters set forth in ECCN 2A984, effectively eliminating any overlap in coverage. Therefore, this final rule makes no change to ECCN 2A984 in response to this comment.

*Comments not related to the proposed rule.*

Comment 43:

One commenter recommended changes to 37 ECCNs and several changes to the USML to address instances where the commenter believed the regulations are inconsistent with the Missile Technology Control Regime or where the commenter believed that ITAR and the EAR are inconsistent or overlap.

Response 43:

BIS is taking no action on this comment because it is not relevant to the July 25 (military electronics) rule.

Comment 44:

Two commenters recommended that certain items be removed from the USML.

Response 44:

BIS is taking no action on these comments because the USML is administered by the Department of State.

### **Detailed Description of Changes Made by This Rule.**

#### *Revision to Note 1 to ECCN 0A614.*

This rule adds the phrase “radar trainers for radars classified under ECCN 3A611” to Note 1 to (ECCN) 0A614, which is an illustrative list of items controlled by that entry. BIS proposed including that phrase in its initial proposal to create ECCN 0A614 (*see* 77 FR 35310, 35316, June 13, 2012). When the final rule creating ECCN 0A614 was published, ECCN 3A611, although proposed, did not yet exist so BIS omitted that phrase from ECCN 0A614 and stated its intent to add the phrase to ECCN 0A614 once ECCN 3A611 was created (*see* 79 FR 264, 267, January 2, 2014). Because this final rule creates ECCN 3A611, it also adds the phrase to ECCN 0A614.

#### *Removal of obsolete cross references from the “Related Controls” paragraphs of ECCNs 3A001, 3D001, 3E001 and 3E003.*

This rule removes from the “Related Controls” paragraphs of ECCNs 3A001, 3D001, 3E001 and 3E003 references to certain specific provisions of the USML because the Department of State rule that is being published concurrently with this rule makes those references obsolete. This



rule also adds to ECCN 3A001 a general reference to USML Categories XI and XV and ECCNs 9A515 and 3A611.

Revisions to ECCN 3A101.

Currently, ECCN 3A101 refers readers to the ITAR for analog-to-digital converters described in paragraph .a. These converters are being moved to the CCL and continue to be controlled for MT reasons because they are identified on the MTCR Annex. Placing such items in this ECCN, rather than the new ECCN 3A611, makes it easier to identify, classify, and control such items. Consequently, this rule revises ECCN 3A101.a to control analog-to-digital converters usable in “missiles” and having any of the characteristics described in 3A101.a.1 or a.2. This rule also makes a conforming revision to the “Related Controls” paragraph of that ECCN.

New 3Y611 Series of ECCNs.

This rule adds new ECCNs 3A611, 3B611, 3D611, and 3E611 to control military electronics and related test, inspection, and production equipment and software and technology currently controlled by USML Category XI that the President determined no longer warrant control on the USML. These new ECCNs also control computers, telecommunications equipment, radar and avionics “specially designed” for military use, and parts, components, accessories, and attachments “specially designed” therefor, and related software and technology to the extent that they are not enumerated on the proposed revisions to Category XI. This structure aligns with the current USML Category XI and ML11, which include within the scope of “electronics” such

items as computers, telecommunications equipment, and radar. BIS believes that it is easier to include such items within the scope of the proposed new “600 series” that corresponds to USML Category XI, rather than creating new “600 series” ECCNs in CCL Categories 4 (computers), 5 (telecommunications), 6 (radar) and 7 (avionics). BIS, however, includes cross references in CCL Categories 4, 5, 6 and 7 to alert readers that ECCN 3A611 may control such items.

The ECCN 3Y611 series, except for ECCN 3Y611.y, is controlled for national security (NS Column 1 or NS1), regional stability (RS Column 1 or RS1), antiterrorism (AT Column 1 or AT1), and United Nations embargo (UN) reasons. ECCNs 3Y611.y will only be controlled for AT1 reasons (with this final rule, ECCN 3B611 does not have a .y paragraph). Each ECCN in this 3Y611 series is described more specifically below.

*New ECCN 3A611.*

ECCN 3A611 paragraph .a controls electronic “equipment,” “end items,” and “systems” “specially designed” for military application that are not enumerated in either a USML category or another “600 series” ECCN.

Paragraph .b is being reserved. The corresponding USML Category is XI(b), which, in the Department of State rule being published concurrently with this rule, continues to be a catch-all control for “Electronic systems or equipment, not elsewhere enumerated in . . . [the ITAR], specially designed for intelligence purposes that collects, surveys, monitors, or exploits the electromagnetic spectrum (regardless of transmission medium), or for counteracting such activities.”

Paragraphs .c and .d control MMIC power amplifiers and discrete microwave transistors, respectively.

Paragraph .c controls MMIC power amplifiers in 13 frequency ranges and paragraph .d controls discrete microwave transistors in 12 distinct frequency ranges. Each range has additional control parameters of peak saturated power output, power added efficiency or fractional bandwidth or some combination of the three. These three parameters also distinguish ECCN 3A611.c and .d from ECCN 3A001.b.2 and .b.3, which also control MMIC power amplifiers and discrete microwave transistors.

A note states that paragraph .d includes bare dice, dice mounted on carriers or dice mounted in packages. The note also recognizes discrete transistors may also be referred to as power amplifiers but that doing so does not change the classification, whether under ECCN 3A001.b.3 or 3A611.d.

Paragraph .e controls high frequency (HF) surface wave radar that maintains the positional state of maritime surface or low altitude airborne objects of interest in a received radar signal through time.

Paragraphs .f, .g, and .h apply respectively to: 1) application specific integrated circuits (ASICs) and programmable logic devices (PLD) programmed for “600 series” items other than .y items; 2) printed circuit boards and populated circuit card assemblies whose layout is “specially designed” for “600 series” items other than .y items; and 3) multichip modules for which the pattern or layout is “specially designed” for “600 series” items other than .y items. In the Note to paragraph .f, ASIC is defined as “an integrated circuit developed and produced for a specific application or function regardless of number of customers for which the integrated circuit is

developed or produced.” ASICs, printed circuit boards and populated circuit card assemblies and multichip modules for .y items are controlled in paragraph .y.

Paragraphs .i through .w are reserved.

Paragraph .x controls “parts,” “components,” “accessories” and “attachments” that are “specially designed” for a commodity controlled by ECCN 3A611 or for an article controlled by USML Category XI, and not enumerated or described in a USML category.

A related control note in ECCN 3A611 clarifies that electronic parts, components, accessories, and attachments that are “specially designed” for military applications that are not enumerated in any USML Category, but are within the scope of a “600 series” ECCN, are controlled by that “600 series” ECCN. For example, electronic components not enumerated on the USML that are “specially designed” for a military aircraft controlled by USML Category VIII or ECCN 9A610 are controlled by ECCN 9A610.x by this final rule. Similarly, electronic components not enumerated on the USML that are “specially designed” for a military vehicle controlled by USML Category VII or ECCN 0A606 are controlled by ECCN 0A606.x. The purpose of this note and the limitations in ECCN 3A611.x is to prevent any overlap of controls over electronics “specially designed” for particular types of items described in other “600 series” ECCNs (which is not be controlled by 3A611.x), on one hand, and other electronic parts, components, accessories, and attachments “specially designed” for military electronics that are not enumerated on the USML (which is controlled by ECCN 3A611.x), on the other.

Additional related control notes address: electronic items that are enumerated in USML categories, application specific integrated circuits, unprogrammed programmable logic devices, printed circuit boards and populated circuit cards, and multichip modules. Finally, a related

control note informs readers that certain radiation-hardened microelectronic circuits are controlled by ECCN 9A515.d.

Notes to ECCN 3A611.x specify that it controls: (1) parts, components, accessories, and attachments “specially designed” for a radar, telecommunications, acoustic system or equipment or computer “specially designed” for military application that are neither controlled in any USML category nor controlled in another “600 series” ECCN; and (2) parts and components “specially designed” for underwater sensors or projectors controlled by proposed USML Category XI(c)(12) containing single-crystal lead magnesium niobate lead titanate (PMN-PT) based piezoelectrics.

This rule includes an additional note to ECCN 3A611.x stating that "Forgings, castings, and other unfinished products, such as extrusions and machined bodies, that have reached a stage in manufacture where they are clearly identifiable by mechanical properties, material composition, geometry, or function as commodities controlled by ECCN 3A611.x are controlled by ECCN 3A611.x." This note, which did not appear in the November 28 (military electronics) rule or the July 25 (military electronics) rule, clarifies BIS’ intent to define the parts, components, accessories and attachments controlled by paragraph .x in a manner that makes the controls under paragraph .x consistent with the controls currently imposed on such parts, components, accessories and attachments by the ITAR (22 C.F.R. § 121.10).

ECCN 3A611 also contains a paragraph .y with 35 subparagraphs that control specified parts, components, accessories and attachments for commodities *in any* “600 series” ECCNs.

Antiterrorism (AT Column 1) is the only reason for control that applies to paragraph .y.

However, as with other “600 series” .y ECCN paragraphs, § 744.21 of the EAR imposes a license requirement for the People’s Republic of China.

New ECCN 3B611.

ECCN 3B611 imposes, under paragraph .a, controls on test, inspection, and production end items and equipment “specially designed” for the “development,” “production,” repair, overhaul, or refurbishing of items controlled in ECCN 3A611 or USML Category XI that are not enumerated in USML Category XI or controlled by another “600 series” ECCN and, under paragraph .x, for “parts,” “components,” “accessories” and “attachments” that are “specially designed” for such test, inspection and production end items and equipment that are not enumerated on the USML or controlled by another “600 series” ECCN. Paragraphs .b through .w are reserved.

New ECCN 3D611.

ECCN 3D611 paragraph .a imposes controls on software “specially designed” for the “development,” “production,” operation, or maintenance of commodities controlled by 3A611 or 3B611 other than software for 3A611.y. Paragraph .b imposes controls on software “specially designed” for the “development,” “production,” operation or maintenance of technology in ECCN 3E611.b; *i.e.*, software (other than build-to-print software) for technology for helix traveling wave tubes (TWTs), transmit/receive or transmit modules, MMICs, and discrete microwave transistors controlled under ECCN 3A611 is not eligible for License Exception STA. Paragraphs .c through .x is reserved. Paragraph .y controls specific “software” “specially

designed” for the “production,” “development,” operation or maintenance of commodities enumerated in ECCNs 3A611.y.

New ECCN 3E611.

ECCN 3E611 imposes controls on “technology” “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software controlled by ECCN 3A611, 3B611 or 3D611. Technology other than “build-to-print” technology for helix traveling wave tubes (TWTs), transmit/receive or transmit modules, MMICs, and discrete microwave transistors controlled under ECCN 3A611 is not eligible for License Exception STA.

Revisions to ECCN 4A003.

As noted above, the analog-to-digital converters described in ECCN 3A101.a are now subject to the EAR and controlled under that ECCN. Adding the text in 3A101.a.2.b for electrical input type analog-to-digital converter printed circuit boards or modules requires this rule to amend ECCN 4A003 to add an MT control for items classified under ECCN 4A003.e when meeting or exceeding the parameters described in ECCN 3A101.a.2.b. This amendment is necessary because the MT items in new paragraph 3A101.a.2.b are a subset of the items in paragraph 4A003.e. As a technical correction, this rule removes from the “Reasons for Control” section of ECCN 4A003 the phrase “NP applies, unless a license exception is available. See § 742.3(b) of the EAR for information on applicable licensing review policies.” That text does not articulate

any license requirement, and no nuclear nonproliferation license requirement for digital computers is set forth elsewhere in the EAR. BIS's regular practice is to impose a license requirement for nuclear nonproliferation reasons on items that are controlled by the Nuclear Suppliers Group. Digital computers are not so controlled.

Revisions to ECCN 5A001.

This rule revises the "Related Controls" paragraph in ECCN 5A001 to provide more detailed references to telecommunications equipment subject to the ITAR under USML Categories XI and XV, while adding a reference to 5A980 and maintaining references to ECCNs 5A101, and 5A991.

New Cross Reference ECCNs.

This final rule creates four new cross reference ECCNs to alert readers that computers, telecommunications equipment, radar and avionics – and parts, components, accessories and attachments "specially designed" therefor – are controlled by ECCN 3A611 if they are "specially designed" for military application. These cross references are intended to reduce the likelihood of confusion that might otherwise arise because computers, telecommunications equipment, radar and avionics generally are in CCL Categories 4, 5 (Part 1), 6 and 7, respectively. The new cross reference ECCNs and the Categories in which they appear are: 4A611, Category 4; 5A611, Category 5, Part 1; 6A611, Category 6; 7A611, Category 7. The avionics cross reference ECCN was not in the November 28 (military electronics) rule.



Corrections to ECCNs 7A006 and 7D101.

This rule corrects the reasons for control paragraph of ECCN 7A006 to state that the MT reason for control applies to those items covered by ECCN 7A006 that also meet or exceed the parameters of ECCN 7A106. ECCN 7A006 now applies the missile technology reason for control to a range of airborne altimeters that extends beyond the range of altimeters that are on the MTCR Annex. BIS's practice is to apply the MT reason for control only to items on that Annex. This change conforms ECCN 7A006 to that practice. Similarly, this rule adds the phrase "for missile technology (MT) reasons" to the heading of ECCN 7D101. Currently, ECCN 7D101 applies the MT reason for control to software for a range of commodity ECCNs. Not all of those commodities are controlled for MT reasons. The new text limits the scope of MT controls in ECCN 7A106 to commodities on the MTCR Annex, and that of ECCN 7D101 to software for commodities on the MTCR Annex.

New 9Y620 series of ECCNs.

This rule creates ECCNs 9A620, 9B620, 9D620, and 9E620 to apply NS1, RS1, AT1 and UN reasons for control to cryogenic and superconducting equipment described in category ML20 of the WAML, and to test, inspection and production equipment, software and technology therefor. Category ML20 covers cryogenic and superconducting equipment that is "specially designed" to be installed in a vehicle for military ground, marine, airborne, or space applications. BIS believes that such equipment is used in experimental or developmental vehicle propulsion

systems that employ superconducting components and cryogenic equipment to cool those components. BIS has not identified evidence of trade in such items. To the extent that exports do exist, the items currently are subject to the license requirements of the USML category that controls the vehicle into which the equipment will be installed, *i.e.*, Category VI, surface vessels; Category VII, ground vehicles; Category VIII, aircraft; and Category XV, spacecraft. This rule places this cryogenic and superconducting equipment, its related test, inspection and production equipment, and its related software and technology into a single set of “600 series” ECCNs ending with the digits “20” to correspond to the relevant WAML category. This approach furthers the administration’s Export Control Reform Initiative goal of aligning U.S. controls with multilateral controls wherever feasible. Each ECCN in this series is described more specifically below.

*New ECCN 9A620.*

ECCN 9A620.a controls equipment “specially designed” to be installed in a vehicle for military ground, marine, airborne, or space applications, capable of operating while in motion and of producing or maintaining temperatures below 103 K (-170°C). Paragraph .b controls “superconductive” electrical equipment (rotating machinery and transformers) “specially designed” to be installed in a vehicle for military ground, marine, airborne, or space applications, and capable of operating while in motion. Paragraphs .c through .w are reserved. Paragraph .x controls parts, components, accessories and attachments “specially designed” for a commodity controlled by ECCN 9A620.

This rule adds a note to ECCN 9A620.x stating that "Forgings, castings, and other unfinished products, such as extrusions and machined bodies, that have reached a stage in manufacture where they are clearly identifiable by mechanical properties, material composition, geometry, or function as commodities controlled by ECCN 9A620.x are controlled by ECCN 9A620.x." This note, which did not appear in the November 28 (military electronics) rule or the July 25 (military electronics) rule, clarifies BIS' intent to define the parts, components, accessories and attachments controlled by paragraph .x in a manner that makes the controls under paragraph .x consistent with the controls currently imposed on such parts components, accessories and attachments by the ITAR (22 C.F.R. § 121.10).

*New ECCN 9B620.*

ECCN 9B620 controls test, inspection, and production end items and equipment "specially designed" for the "development," "production," repair, overhaul or refurbishing of items controlled in ECCN 9A620.

*New ECCN 9D620.*

ECCN 9D620 controls software "specially designed" for the "development," "production," operation, or maintenance of commodities controlled by ECCNs 9A620 or 9B620.

*New ECCN 9E620.*

ECCN 9E620 controls “technology” “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software controlled by ECCNs 9A620, 9B620 or 9D620.

*New controls on software and technology for certain wing folding systems.*

The Department of State rule being published simultaneously with this final rule revises USML Category VIII, paragraph (h)(4) by adding criteria to ensure that certain wing folding systems for commercial aircraft, and the related software and technology, are not controlled as defense articles on the USML. As a result, the Department of Commerce implements in this final rule provisions to control software and technology for the development of certain wing folding systems for aircraft with gas turbine engines.

A wing folding system for military aircraft, other than one described in the revised USML Category VIII(h)(4), is controlled in the catch-all paragraph .x and related software and technology controls in the 600 Series ECCNs 9A610, 9D610 and 9E610. A wing folding system for commercial and other civilian aircraft is controlled under ECCN 9A991, which controls, for antiterrorism reasons, aircraft and parts and components that are not elsewhere specified on the CCL. Production and use software and technology for such systems can be adequately controlled under the related ECCNs 9D991 and 9E991, respectively. However, software and technology controlled by these two ECCNs require a license to only five destinations. License requirements for a greater number of destinations are needed for development software and technology for wing folding systems to be used on large commercial aircraft because the software and technology required to develop a robust civil system would confer insights that

would be useful to the development of a military wing folding system. Ability to develop or acquire aircraft with robust wing folding systems greatly increases the number and types of military aircraft that can be deployed from an aircraft carrier because of the limited space available for storage and maintenance activities on such vessels as compared to a land based airport.

No multilateral export controls on this development software and technology currently exist. Moreover, this software and technology does not meet the parameters of any current ECCN that would provide a license requirement for the appropriate number of destinations, creating a risk that the civil development software and technology will be exported without the U.S. Government prior review that such transactions merit.

Based on the foregoing, the Department of Commerce, with the concurrence of the Departments of Defense and State, has determined that software and technology for the development of wing folding systems for aircraft with gas turbine engines should be controlled on the CCL for export due to the growth in civil application for wing folding systems. The software and technology for the development of these systems still provide at least a significant military or intelligence advantage to the United States such that control at the AT-only level in ECCNs 9D991 and 9E991 would not sufficiently limit the proliferation of this technology contrary to U.S. national security and foreign policy interest. Therefore, this final rule adds such software and technology to Supplement No. 5 to part 774, thereby controlling them under ECCNs 0D521 and 0E521, respectively. In accordance with § 742.6(a)(7)(iii) of the EAR, this software and technology will remain so-classified for one year from the date they are listed in Supplement No. 5 to part 774 of the EAR unless the software or technology is re-classified under a different ECCN, the 0Y521 classification is extended, or the software or technology is designated as EAR99. The U.S.

Government intends to submit a proposal to control this software and technology on the Wassenaar Arrangement Dual-Use List. An ECCN 0Y521 classification may be extended for two one-year periods to provide time for the U.S. Government and multilateral regime(s) to reach agreement on controls for the item, and provided that the U.S. Government has submitted a proposal to obtain multilateral controls over the item. Further extension beyond three years may occur only if the Under Secretary for Industry and Security makes a determination that such an extension is in the national security or foreign policy interests of the United States. An extension or re-extension, including a determination by the Under Secretary for Industry and Security, will be published in the *Federal Register*.

### **Export Administration Act**

Although the Export Administration Act expired on August 20, 2001, the President, through Executive Order 13222 of August 17, 2001, 3 CFR, 2001 Comp., p. 783 (2002), as amended by Executive Order 13637 of March 8, 2013, 78 FR 16129 (March 13, 2013) and as extended by the Notice of August 8, 2013, 78 FR 49107 (August 12, 2013), has continued the Export Administration Regulations in effect under the International Emergency Economic Powers Act. BIS continues to carry out the provisions of the Export Administration Act, as appropriate and to the extent permitted by law, pursuant to Executive Order 13222 as amended by Executive Order 13637.

### **Rulemaking requirements.**

1. Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distribute impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been designated a “significant regulatory action,” although not economically significant, under section 3(f) of Executive Order 12866. Accordingly, the rule has been reviewed by the Office of Management and Budget (OMB).

2. Notwithstanding any other provision of law, no person is required to respond to, nor is subject to a penalty for failure to comply with, a collection of information, subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) (PRA), unless that collection of information displays a currently valid OMB control number. This final rule affects two approved collections: Simplified Network Application Processing System (control number 0694-0088), which includes, among other things, license applications, and License Exceptions and Exclusions (0694-0137).

As stated in the proposed rule published on July 15, 2011 (76 FR 41958), BIS initially believed that the combined effect of all rules to be published adding items to the EAR that will be removed from the ITAR as part of the administration’s Export Control Reform Initiative will increase the number of license applications to be submitted by approximately 16,000 annually. As the review of the USML has progressed, the interagency group has gained more specific information about the number of items that will come under BIS jurisdiction and whether those items would be eligible for export under license exception. As of June 21, 2012, BIS revised that estimate to an increase in license applications of 30,000 annually, resulting in an increase in

burden hours of 8,500 (30,000 transactions at 17 minutes each) under control number 0694–0088. BIS continues to believe that its revised estimate is accurate.

Military electronic equipment, certain cryogenic and superconducting equipment, related test, inspection and production equipment, “parts,” “components,” “accessories” and “attachments,” “software” and “technology” formerly on the USML become eligible for License Exception STA under this rule. BIS believes that the increased use of License Exception STA resulting from the combined effect of all rules to be published adding items to the EAR that would be removed from the ITAR as part of the Administration’s Export Control Reform Initiative would increase the burden associated with control number 0694–0137 by about 23,858 hours (20,450 transactions @ 1 hour and 10 minutes each).

BIS expects that this increase in burden will be more than offset by a reduction in burden hours associated with approved collections related to the ITAR. The largest impact of the proposed rule would likely apply to exporters of replacement parts for military electronic equipment that has been approved under the ITAR for export to allies and regime partners. Because, with few exceptions, the ITAR allows exemptions from license requirements only for exports to Canada, most exports of such parts, even when destined to NATO and other close allies, require specific State Department authorization. Under the EAR, as proposed here, such parts would become eligible for export to NATO and other multi-regime allies under License Exception STA. Use of License Exception STA imposes a paperwork and compliance burden because, for example, exporters must furnish information about the item being exported to the consignee and obtain from the consignee an acknowledgement and commitment to comply with the EAR. However, the Administration understands that complying with the burdens of STA is likely less burdensome than applying for licenses. For example, under License Exception STA, a single



consignee statement can apply to an unlimited number of products, need not have an expiration date, and need not be submitted to the government in advance for approval. Suppliers with regular customers can tailor a single statement and assurance to match their business relationship rather than applying repeatedly for licenses with every purchase order to supply reliable customers in countries that are close allies or members of export control regimes or both.

Even in situations in which a license would be required under the EAR, the burden is likely to be reduced compared to the license requirement of the ITAR. In particular, license applications for exports of technology controlled by ECCN 3E611 are likely to be less complex and burdensome than the authorizations required to export ITAR-controlled technology, *i.e.*, Manufacturing License Agreements and Technical Assistance Agreements.

3. This rule does not contain policies with Federalism implications as that term is defined under E.O. 13132.

4. BIS finds good cause under 5 U.S.C. 553(b)(B) to waive prior notice, the opportunity for public comment for the provisions of this final rule imposing controls on software and technology for the development and production of wing folding systems for civil aircraft with gas turbine engines to ECCN 0D521 and 0E521 via Supplement No. 5 to part 774 of the EAR. BIS, with the concurrence of the U.S. Departments of Defense and State, is implementing this rule because the software and technology for those wing folding systems provide a significant military or intelligence advantage to the United States and that expedited control on the CCL is needed to prevent diversion of such software and technology to governments or parties that could use the knowledge conveyed by such software and technology to acquire insights that would be useful in developing military aircraft wing folding systems and that likely

would use such insights to the detriment of United States national security and foreign policy interests.

Immediate implementation will allow BIS to prevent exports of these items to users and for uses that pose a national security threat to the United States or its allies. If BIS delayed this rule to allow for prior notice and opportunity for public comment, the resulting delay in implementation would afford an opportunity for the export of these items to users and uses that pose such a national security threat, thereby undermining the purpose of the rule. In addition, if parties receive notice of the U.S. Government's intention to control these items under 0Y521 once a final rule was published, they would have an incentive to either accelerate orders of these items or attempt to have the items exported prior to the imposition of the control.

Further, BIS finds good cause to waive the 30-day delay in effectiveness under 5 U.S.C. 553(d)(3). Immediate implementation will allow BIS to prevent exports of these items to users and for uses that pose a national security threat to the United States or its allies. If BIS delayed this rule to allow for a 30-day delay in effectiveness, the resulting delay in implementation would afford an opportunity for the export of these items to users and uses that pose such a national security threat, thereby undermining the purpose of the rule.

Although notice and opportunity for comment are not required, BIS welcomes comments on the addition of wing folding technology or any other aspects of this rule at any time.

Because prior notice and an opportunity for public comment are not required to be given by 5 U.S.C. 553, or by any other law, the analytical requirements of the Regulatory Flexibility Act, 5

U.S.C. 601 *et seq.*, are not applicable for the provisions imposing controls on software and technology for the development and production of wing folding systems for aircraft with gas turbine engines.

5. The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*, generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to the notice and comment rulemaking requirements under the Administrative Procedure Act (5 U.S.C. 553) or any other statute, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Under section 605(b) of the RFA, however, if the head of an agency (or his or her designee) certifies that a rule will not have a significant impact on a substantial number of small entities, the statute does not require the agency to prepare a regulatory flexibility analysis. Pursuant to section 605(b), the Chief Counsel for Regulation, Department of Commerce, submitted a memorandum to the Chief Counsel for Advocacy, Small Business Administration, certifying that the November 28 (military electronics) rule would not have a significant impact on a substantial number of small entities. The rationale for that certification was set forth in the preamble to that proposed rule (77 FR 70945, 70950- 70951, November 28, 2012). Although BIS received no comments on that rationale, and has accordingly made no changes to the proposed rule based on the RFA certification, BIS, in the interest of openness and transparency, briefly restates the rationale behind the certification in this final rule.

This rule is part of the Administration's Export Control Reform Initiative, which seeks to revise the USML to a positive list – one that does not use generic, catch-all controls for items listed –

and to move some items that the President has determined no longer merit control under the ITAR and should be controlled under the CCL.

Although BIS does not collect data on the size of entities that apply for and are issued export licenses, and is therefore unable to estimate the exact number of small entities – as defined by the Small Business Administration’s regulations implementing the RFA – BIS acknowledges that some small entities may be affected by this proposed rule.

The main effects on small entities resulting from this rule will be in application times, costs, and delays in receiving licenses to export goods subject to the CCL. However, while small entities may experience some costs and time delays for exports due to the license requirements of the CCL, these costs and delays will likely be significantly less than they were for items previously subject to the USML. BIS believes that in fact this rule will result in significantly reduced administrative costs and delays for exports of items that will, upon this rule’s implementation, be subject to the EAR rather than the ITAR. Currently, USML applicants must pay to use the USML licensing procedure even if they never actually are authorized to export. Registration fees for manufacturers and exporters of articles on the USML start at \$2,250 per year, increase to \$2,750 for organizations applying for one to ten licenses per year and further increases to \$2,750 plus \$250 per license application (subject to a maximum of three percent of total application value) for those who need to apply for more than ten licenses per year. By contrast, BIS is statutorily prohibited from imposing licensing fees. In addition, exporters and reexporters of goods that would become subject to the EAR under this rule would need fewer licenses because their transactions would become eligible for license exceptions that were not available under the ITAR. Additionally, the ITAR controlled parts and components even when they were incorporated – in any amount – into a foreign-made product. That limitation on the use of U.S.-

made goods subject to the ITAR discouraged foreign manufacturers from importing U.S. goods. However, the EAR has a *de minimis* exception for U.S.-manufactured goods that are incorporated into foreign-made products. This exception may benefit small entities by encouraging foreign producers to use more U.S.-made items in their goods.

Even where an exporter or reexporter would need to obtain a license under the EAR, that process is both cheaper and the process is more flexible than obtaining a license under the ITAR. For example, unlike the ITAR, the EAR does not require license applicants to provide BIS with a purchase order with the application, meaning that small (or any) entities can enter into negotiations or contracts for the sale of goods without having to caveat any sale presentations with a reference to the need to obtain a license under the ITAR before shipment can occur. Second, the EAR allows license applicants to obtain licenses to cover all expected exports or reexports to a particular consignee over the life of a license, rather than having to obtain a new license for every transaction.

In short, BIS expects that the changes to the EAR proposed in this rule will have a positive effect on all affected entities, including small entities. While BIS acknowledges that this rule may have some cost impacts to small (and other) entities, those costs are more than offset by the benefits to the entities from the licensing procedures under the EAR, which are much less costly and less time consuming than the procedures under the ITAR. Accordingly, the Chief Counsel for Regulation for the Department of Commerce has certified that this rule, if implemented, will not have a significant economic impact on a substantial number of small entities. Accordingly, an initial regulatory flexibility analysis is not required, and none has been prepared.

## List of Subjects in Part 774

Exports, Reporting and recordkeeping requirements

Accordingly, part 774 of the Export Administration Regulations (15 CFR Parts 730-774) is amended as follows:

### **PART 774 - [AMENDED]**

1. The authority citation for 15 CFR part 774 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 10 U.S.C. 7420; 10 U.S.C. 7430(e); 22 U.S.C. 287c, 22 U.S.C. 3201 *et seq.*; 22 U.S.C. 6004; 30 U.S.C. 185(s), 185(u); 42 U.S.C. 2139a; 42 U.S.C. 6212; 43 U.S.C. 1354; 15 U.S.C. 1824a; 50 U.S.C. app. 5; 22 U.S.C. 7201 *et seq.*; 22 U.S.C. 7210; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

2. In Supplement No. 1 to part 774, amend Export Control Classification Number 0A614 by revising “Note 1 to 0A614” to read as follows:

Supplement No. 1 to Part 774 – The Commerce Control List

\* \* \* \* \*

**0A614 Military Training “Equipment,” as Follows (see List of Items Controlled).**

\* \* \* \* \*

**Note 1 to 0A614:** *This entry includes operational flight trainers, radar target trainers, flight simulators for aircraft classified under ECCN 9A610.a, human-rated centrifuges, radar trainers for radars classified under ECCN 3A611, instrument flight trainers for military aircraft, navigation trainers for military items, target equipment, armament trainers, military pilotless aircraft trainers, mobile training units and training “equipment” for ground military operations.*

\* \* \* \* \*

3. In Supplement No. 1 to part 774, revise the “Related Controls” paragraph in the “List of Items Controlled” of ECCN 3A001 to read as follows:

Supplement No. 1 to Part 774 – The Commerce Control List

\* \* \* \* \*

**3A001 Electronic components and “specially designed” “components” therefor, as follows (see List of Items Controlled).**

\* \* \* \* \*

#### **List of Items Controlled**

*Related Controls:* See USML Categories XI and XV and ECCNs 9A515 and 3A611.

\* \* \* \* \*

4. In Supplement No. 1 to Part 774, Category 3, amend Export Control Classification Number (ECCN) 3A101 by:

- a. Revising the Related Controls paragraph in the List of Items Controlled section; and
- b. Revising paragraph a. in the Items paragraph in the List of Items Controlled section.

The revisions read as follows:

Supplement No. 1 to Part 774 – The Commerce Control List

\* \* \* \* \*

**3A101 Electronic equipment, devices and components, other than those controlled by 3A001, as follows (see List of Items Controlled).**

\* \* \* \* \*

List of Items Controlled



\* \* \* \* \*

*Related Controls:* See also ECCN 4A003.e for controls on analog-to-digital converters, printed circuit boards, or modules for computers.

\* \* \* \* \*

*Items:*

a. Analog-to-digital converters usable in “missiles,” and having any of the following characteristics:

a.1. “Specially designed” to meet military specifications for ruggedized equipment;

a.2. “Specially designed” for military use and being any of the following types:

a.2.a. Analog-to-digital converter microcircuits which are radiation-hardened or have all of the following characteristics:

a.2.a.1. Having a quantization corresponding to 8 bits or more when coded in the binary system;

a.2.a.2. Rated for operation in the temperature range from -54°C to above +125°C;  
*and*

a.2.a.3. Hermetically sealed; *or*

a.2.b. Electrical input type analog-to-digital converter printed circuit boards or modules, having all of the following characteristics:

a.2.b.1. Having a quantization corresponding to 8 bits or more when coded in the binary system;

a.2.b.2. Rated for operation in the temperature range from below -45°C to above +55°C; and

a.2.b.3. Incorporating microcircuits identified in 3A101.a.2 .a;

\* \* \* \* \*

5. In Supplement No. 1 to Part 774, between the entries for ECCNs 3A292 and 3A980, add an entry for ECCN 3A611 to read as follows:

**3A611 Military electronics, as follows (see List of Items Controlled).**

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry except 3A611.y	NS Column 1
RS applies to entire entry except 3A611.y	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry except 3A611.y	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*LVS*: \$1500 for 3A611.a, .d through .h and .x; N/A for ECCN 3A611.c.

*GBS*: N/A

*CIV*: N/A

**Special Conditions for STA**

*STA*: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 3A611.

**List of Items Controlled**

*Related Controls:* (1) Electronic items that are enumerated in USML Category XI or other USML categories, and technical data (including software) directly related thereto, are subject to the ITAR. (2) Application specific integrated circuits (ASICs) and programmable logic devices (PLD) that are programmed for defense articles that are subject to the ITAR are controlled in USML Category XI(c)(1). (3) See ECCN 3A001.a.7 for controls on unprogrammed programmable logic devices (PLD). (4) Printed circuit boards and populated circuit cards with a layout that is “specially designed” for defense articles are controlled in USML Category XI(c)(2). (5) Multichip modules for which the pattern or layout is “specially designed” for defense articles are controlled in USML Category XI(c)(3). (6) Electronic items “specially designed” for military application that are not controlled in any USML category but are within the scope of another “600 series” ECCN are controlled by that “600 series” ECCN. For example, electronic components not enumerated on the USML or a “600 series” other than 3A611 that are “specially designed” for a military aircraft controlled by USML Category VIII or ECCN 9A610 are controlled by the catch-all control in ECCN 9A610.x. Electronic components not enumerated on the USML or another “600 series” entry that are “specially designed” for a military vehicle controlled by USML Category VII or ECCN 0A606 are controlled by ECCN 0A606.x. Electronic components not enumerated on the USML that are “specially designed” for a missile controlled by USML Category IV are controlled by ECCN 0A604. (7) Certain radiation-hardened microelectronic circuits are controlled by ECCN 9A515.d or 9A515.e, when “specially designed” for defense articles, “600 series” items, or items controlled by 9A515.

*Related Definitions:* N/A

*Items:*

- a. Electronic “equipment,” “end items,” and “systems” “specially designed” for a military application that are not enumerated or otherwise described in either a USML category or another “600 series” ECCN.

***Note to 3A611.a:** ECCN 3A611.a includes any radar, telecommunications, acoustic or computer equipment, end items, or systems “specially designed” for military application that are not enumerated or otherwise described in any USML category or controlled by another “600 series” ECCN.*

- b. [Reserved]

- c. Microwave “monolithic integrated circuits” (MMIC) power amplifiers having any of the following:

- c.1. Rated for operation at frequencies exceeding 2.7 GHz up to and including 2.9 GHz and having any of the following:

c.1.a. A “fractional bandwidth” greater than 15%, with a peak saturated power output greater than 75 W (48.75 dBm) and a power added efficiency of 55% or greater anywhere within the operating frequency range; or

c.1.b. A “fractional bandwidth” greater than 60%, with a peak saturated power output greater than 150 W (51.8 dBm) anywhere within the operating frequency range;

c.2. Rated for operation at frequencies exceeding 2.9 GHz up to and including 3.2 GHz and having any of the following:

c.2.a. A “fractional bandwidth” greater than 15%, with a peak saturated power output greater than 55 W (47.4 dBm) and a power added efficiency of 55% or greater anywhere within the operating frequency range; or

c.2.b. A “fractional bandwidth” greater than 55%, with a peak saturated power output greater than 110 W (50.4 dBm) anywhere within the operating frequency range;

c.3. Rated for operation at frequencies exceeding 3.2 GHz up to and including 3.7 GHz and having any of the following:

c.3.a. A “fractional bandwidth” greater than 15%, with a peak saturated power output greater than 40 W (46 dBm) and a power added efficiency of 45% or greater anywhere within the operating frequency range; or

c.3.b. A “fractional bandwidth” greater than 50%, with a peak saturated power output greater than 80 W (49 dBm) anywhere within the operating frequency range;

c.4. Rated for operation at frequencies exceeding 3.7 GHz up to and including 6.8 GHz and having any of the following:

c.4.a. A “fractional bandwidth” greater than 15%, with a peak saturated power output greater than 20 W (43 dBm) and a power added efficiency of 40% or greater anywhere within the operating frequency range; or

c.4.b. A “fractional bandwidth” greater than 45%, with a peak saturated power output greater than 40 W (46 dBm) anywhere within the operating frequency range;

c.5. Rated for operation at frequencies exceeding 6.8 GHz up to and including 8.5 GHz and having any of the following:

c.5.a. A “fractional bandwidth” greater than 10%, with a peak saturated power output greater than 10 W (40.0 dBm) and a power added efficiency of 40% or greater anywhere within the operating frequency range; or

c.5.b. A “fractional bandwidth” greater than 40%, with a peak saturated power output greater than 20 W (43 dBm) anywhere within the operating frequency range;

c.6. Rated for operation at frequencies exceeding 8.5 GHz up to and including 16 GHz and having any of the following:

c.6.a. A “fractional bandwidth” greater than 10%, with a peak saturated power output greater than 5 W (37 dBm) and a power added efficiency of 35% or greater anywhere within the operating frequency range; or



- c.6.b A “fractional bandwidth” greater than 40%, with a peak saturated power output greater than 10 W (40 dBm) anywhere within the operating frequency range;
- c.7. Rated for operation at frequencies exceeding 16 GHz up to and including 31.8 GHz with a “fractional bandwidth” greater than 10%, and having a peak saturated power output greater than 3 W (34.77 dBm) and a power added efficiency of 20% or greater anywhere within the operating frequency range;
- c.8. Rated for operation at frequencies exceeding 31.8 GHz up to and including 37 GHz, and having a peak saturated power output greater than 2 W (33 dBm) anywhere within the operating frequency range;
- c.9. Rated for operation at frequencies exceeding 37 GHz up to and including 43.5 GHz with a “fractional bandwidth” greater than 10%, and having a peak saturated power output greater than 1 W (30 dBm) and a power added efficiency of 15% or greater anywhere within the operating frequency range;
- c.10. Rated for operation at frequencies exceeding 43.5 GHz up to and including 75 GHz with a “fractional bandwidth” greater than 10%, and having a peak saturated power output greater than 31.62 mW (15 dBm) and a power added efficiency of 10% or greater anywhere within the operating frequency range;
- c.11. Rated for operation at frequencies exceeding 75 GHz up to and including 90 GHz with a “fractional bandwidth” greater than 5%, and having a peak saturated power output greater than 10 mW (10 dBm) and a power added efficiency of 10% or greater anywhere within the operating frequency range;

c.12. Rated for operation at frequencies exceeding 90 GHz up to and including 110 GHz and having a peak saturated power output greater than 1.0 mW (0 dBm) anywhere within the operating frequency range; or

c.13. Rated for operation at frequencies exceeding 110 GHz and having a peak saturated power output greater than 100 nW (-40 dBm) anywhere within the operating frequency range.

***Note 1 to 3A611.c:** The control status of an item that has rated operating frequency including frequencies listed in more than one frequency range, as defined by 3A611.c.1 through 3A611.c.13, is determined by the lowest saturated power output threshold.*

***Note 2 to 3A611.c:** Peak saturated power output may also be referred to as output power, saturated power output, maximum power output, peak power output, or peak envelope power output.*

d. Discrete microwave transistors having any of the following:

d.1. Rated for operation at frequencies exceeding 2.7 GHz up to and including 2.9 GHz and having a peak saturated power output greater than 400 W (56 dBm) and a power added efficiency of 60% or greater anywhere within the operating frequency range;

d.2. Rated for operation at frequencies exceeding 2.9 GHz up to and including 3.2 GHz and having a peak saturated power output greater than 205 W (53.12 dBm) and a power added efficiency of 60% or greater anywhere within the operating frequency range;

- d.3. Rated for operation at frequencies exceeding 3.2 GHz up to and including 3.7 GHz and having a peak saturated power output greater than 115 W (50.61 dBm) and a power added efficiency of 45% or greater anywhere within the operating frequency range;
- d.4. Rated for operation at frequencies exceeding 3.7 GHz up to and including 6.8 GHz and having a peak saturated power output greater than 60 W (47.78 dBm) and a power added efficiency of 45% or greater anywhere within the operating frequency range;
- d.5. Rated for operation at frequencies exceeding 6.8 GHz up to and including 8.5 GHz and having a peak saturated power output greater than 50 W (47 dBm) and a power added efficiency of 50% or greater anywhere within the operating frequency range;
- d.6. Rated for operation at frequencies exceeding 8.5 GHz and up to and including 12 GHz and having a peak saturated power output greater than 20 W (43 dBm) and a power added efficiency of 35% or greater anywhere within the operating frequency range;
- d.7. Rated for operation at frequencies exceeding 12 GHz up to and including 16 GHz and having a peak saturated power output greater than 40 W (46 dBm) and a power added efficiency of 35% or greater anywhere within the operating frequency range;
- d.8. Rated for operation at frequencies exceeding 16 GHz up to and including 31.8 GHz and having a peak saturated power output greater than 20 W (43 dBm) and a power added efficiency of 30% or greater anywhere within the operating frequency range;
- d.9. Rated for operation at frequencies exceeding 31.8 GHz up to and including 37 GHz and having a peak saturated power output greater than 2 W (33 dBm) anywhere within the operating frequency range;

d.10. Rated for operation at frequencies exceeding 37 GHz up to and including 43.5 GHz and having a peak saturated power output greater than 1 W (30 dBm) and a power added efficiency of 20% or greater anywhere within the operating frequency range; or

d.11. Rated for operation at frequencies exceeding 43.5 GHz to and including 75 GHz and having a peak saturated power output greater than 0.5 W (27 dBm) and a power added efficiency of 15% or greater anywhere within the operating frequency range;

d.12. Rated for operation at frequencies exceeding 75 GHz and having a peak saturated power output greater than 0.1 W (20 dBm) anywhere within the operating frequency range.

***Note 1 to 3A611.d:** The control status of an item that has rated operating frequency including frequencies listed in more than one frequency range, as defined by 3A611.d.1 through 3A611.d.12, is determined by the lowest saturated output power threshold.*

***Note 2 to 3A611.d:** Peak saturated power output may also be referred to as output power, saturated power output, maximum power output, peak power output, or peak envelope power output.*

***Note 3 to 3A611.d:** 3A611.d includes bare dice, dice mounted on carriers, or dice mounted in packages. Some discrete transistors may also be referred to as power amplifiers, but the status of these products is determined by 3A001.b.3. and 3A611.d.*

e. High frequency (HF) surface wave radar that maintains the positional state of maritime surface or low altitude airborne objects of interest in a received radar signal through time.

***Note to 3A611.e:*** ECCN 3A611.e does not apply to systems, equipment, and assemblies “specially designed” for marine traffic control.

f. Application specific integrated circuits (ASICs) and programmable logic devices (PLD) that are not controlled by paragraph .y of this entry and that are programmed for “600 series” items.

***Note to paragraph .f:*** In this paragraph, the term ‘application specific integrated circuit’ means an integrated circuit developed and produced for a specific application or function regardless of number of customers for which the integrated circuit is developed or produced.

g. Printed circuit boards and populated circuit card assemblies that are not controlled by paragraph .y of this entry and for which the layout is “specially designed” for “600 series” items.

h. Multichip modules that are not controlled by paragraph .y of this entry and for which the pattern or layout is “specially designed” for “600 series” items.

i. through w. [Reserved]

x. “Parts,” “components,” “accessories” and “attachments” that are “specially designed” for a commodity controlled by this entry or for an article controlled by USML Category XI, and not enumerated or described in any USML category or another 600 series ECCN or in paragraph .y of this entry.

***Note 1 to ECCN 3A611.x:*** ECCN 3A611.x includes “parts,” “components”, “accessories”, and “attachments” “specially designed” for a radar, telecommunications, acoustic system or equipment or computer “specially designed” for military application that are neither controlled in any USML category nor controlled in another “600 series” ECCN.

**Note 2 to ECCN 3A611.x:** *ECCN 3A611.x controls “parts” and “components” “specially designed” for underwater sensors or projectors controlled by USML Category XI(c)(12) containing single-crystal lead magnesium niobate lead titanate (PMN-PT) based piezoelectrics.*

**Note 3 to ECCN 3A611.x:** *Forgings, castings, and other unfinished products, such as extrusions and machined bodies, that have reached a stage in manufacture where they are clearly identifiable by mechanical properties, material composition, geometry, or function as commodities controlled by ECCN 3A611.x are controlled by ECCN 3A611.x.*

y. Specific “parts,” “components,” “accessories” and “attachments” “specially designed” for a commodity subject to control in a “600 series” ECCN or a defense article and not elsewhere specified in any “600 series” ECCN or the USML as follows, and “parts,” “components,” “accessories,” and “attachments” “specially designed” therefor:

y.1. Electrical connectors;

y.2. Electric fans;

y.3. Heat sinks;

y.4. Joy sticks;

y.5. Mica paper capacitors;

y.6. Microphones;

y.7. Potentiometers;

y.8. Rheostats;

y.9. Electric connector backshells;

y.10. Solenoids;

y.11. Speakers;

y.12. Trackballs;

y.13. Electric transformers;

y.14. Application specific integrated circuits (ASICs) and programmable logic devices (PLD) that are programmed for commodities controlled in the .y paragraph of any “600 series” ECCN;

y.15. Printed circuit boards and populated circuit card assemblies for which the layout is “specially designed” for an item controlled by the .y paragraph of any “600 series” ECCN;

y.16. Multichip modules for which the pattern or layout is “specially designed” for an item in the .y paragraph of a “600 series” ECCN;

y.17. Circuit breakers;

y.18. Ground fault circuit interrupters;

y.19. Electrical contacts;

y.20. Electrical guide pins;

y.21. Filtered and unfiltered mechanical switches;

- y.22. Thumbwheels;
- y.23. Fixed resistors;
- y.24. Electrical jumpers;
- y.25. Grounding straps;
- y.26. Indicator dials;
- y.27. Contactors;
- y.28. Touchpads;
- y.29. Mechanical caps;
- y.30. Mechanical plugs;
- y.31. Finger barriers;
- y.32. Flip-guards;
- y.33. Identification plates and nameplates;
- y.34. Knobs;
- y.35. Hydraulic, pneumatic, fuel and lubrication gauges.

6. In Supplement No. 1 to Part 774, between the entries for ECCNs 3B002 and 3B991, add an entry for ECCN 3B611 to read as follows:



**3B611 Test, inspection, and production commodities for military electronics, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry	NS Column 1
RS applies to entire entry	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*LVS:* \$1500

*GBS:* N/A

*CIV:* N/A

### **Special Conditions for STA**

*STA:* Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 3B611.

### **List of Items Controlled**

*Related Controls:* N/A

*Related Definitions:* N/A

*Items:*

a. Test, inspection, and production end items and equipment “specially designed” for the “development,” “production,” repair, overhaul or refurbishing of items controlled in ECCN 3A611 (except 3A611.y) or USML Category XI that are not enumerated in USML Category XI or controlled by another “600 series” ECCN.

b. through w. [Reserved]

x. “Parts,” “components,” “accessories” and “attachments” that are “specially designed” for a commodity listed in this entry and that are not enumerated on the USML or controlled by another “600 series” ECCN.

7. In Supplement No. 1 to part 774, revise the “Related Controls” paragraph in the “List of Items Controlled” of ECCN 3D001 to read as follows:

**3D001 “Software” “specially designed” for the “development” or “production” of equipment controlled by 3A001.b to 3A002.g or 3B (except 3B991 and 3B992).**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* N/A

\* \* \* \* \*

8. In Supplement No. 1 to Part 774, between the entries for ECCNs 3D101 and 3D980, add an entry for ECCN 3D611 to read as follows:

**3D611 “Software” “specially designed” for military electronics, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry except 3D611.y	NS Column 1
RS applies to entire entry except 3D611.y	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry except 3D611.y	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*CIV:* N/A

*TSR:* N/A

**Special Conditions for STA**

*STA:* 1. Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any “software” in 3D611. 2. Except for “build-to-print” software, License Exception STA is not eligible for software enumerated in ECCN 3D611.b.

**List of Items Controlled**

*Related Controls:* “Software” directly related to articles enumerated in USML Category XI is controlled in USML Category XI(d).

*Related Definitions:* N/A

*Items:*

- a. “Software” “specially designed” for the “development,” “production,” operation, or maintenance of commodities controlled by ECCN 3A611 (other than 3A611.y) and 3B611.

b. “Software” “specially designed” for the “development,” “production,” operation or maintenance of technology in ECCN 3E611.b.

c. through x. [Reserved]

y. “Software” “specially designed” for the “production,” “development,” operation or maintenance of commodities enumerated in ECCNs 3A611.y.

9. In Supplement No. 1 to part 774, revise the “Related Controls” paragraph in the “List of Items Controlled” of ECCN 3E001 to read as follows:

**3E001 “Technology” according to the General Technology Note for the “development” or “production” of equipment or materials controlled by 3A (except 3A292, 3A980, 3A981, 3A991 3A992, or 3A999), 3B (except 3B991 or 3B992) or 3C (except 3C992).**

\* \* \* \* \*

#### **List of Items Controlled**

*Related Controls:* See also 3E101 and 3E201.

\* \* \* \* \*

10. In Supplement No. 1 to part 774, revise the “Related Controls” paragraph in the “List of Items Controlled” of ECCN 3E003 to read as follows:

**3E003 Other “technology” for the “development” or “production” of the following (see List of Items Controlled).**

**List of Items Controlled**

*Related Controls:* See 3E001 for silicon-on-insulation (SOI) technology for the “development” or “production” related to radiation hardening of integrated circuits.

11. In Supplement No. 1 to Part 774, between the entries for ECCNs 3E292 and 3E980, add an entry for ECCN 3E611 to read as follows:

**3E611 “Technology” “required” for military electronics, as follows (see List of Items Controlled).**

## License Requirements

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry except 3E611.y	NS Column 1
RS applies to entire entry except 3E611.y	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry except 3E611.y	See § 746.1(b) for UN controls

## List Based License Exceptions (see Part 740 for a description of all license exceptions)

*CIV:* N/A

*TSR:* N/A



## **Special Conditions for STA**

*STA:* 1. Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any “technology” in 3E611. 2. Except for “build-to-print technology,” License Exception STA is not eligible for “technology” enumerated in ECCN 3E611.b.

## **List of Items Controlled**

*Related Controls:* Technical data directly related to articles enumerated in USML Category XI is controlled in USML Category XI(d).

*Related Definitions:* N/A

*Items:*

a. “Technology” (other than that controlled by 3E611.b or 3E611.y) “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software controlled by ECCN 3A611, 3B611 or 3D611.

b. “Technology” “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of the following if controlled by ECCN 3A611, including 3A611.x:

b.1. Helix traveling wave tubes (TWTs);

b.2. Transmit/receive or transmit modules;

b.3. Microwave monolithic integrated circuits (MMIC); or

b.4. Discrete microwave transistors.

c. through x. [Reserved]

y. “Technology” “required” for the “production,” “development,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software enumerated in ECCNs 3A611.y or 3D611.y.

12. In Supplement No. 1 to Part 774, amend ECCN 4A003 by revising the License Requirements section to read as follows:

**4A003 “Digital computers”, “electronic assemblies”, and related equipment therefor, as follows (see List of Items Controlled) and “specially designed” components therefor.**

### **License Requirements**

*Reason for Control:* NS, MT, CC, AT

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to 4A003.b and .c	NS Column 1
NS applies to 4A003.e and .g	NS Column 2
MT applies to 4A003.e when the parameters in 3A101.a.2.b are met or exceeded	MT Column 1
CC applies to “digital computers” for computerized finger-print equipment	CC Column 1
AT applies to entire entry (refer to 4A994 for controls on “digital computers” with a APP >	AT Column 1

0.0128 but $\leq 3.0$ WT)	
---------------------------	--

*Note 1: For all destinations, except those countries in Country Group E:1 of Supplement No. 1 to part 740 of the EAR, no license is required (NLR) for computers with an “Adjusted Peak Performance” (“APP”) not exceeding 3.0 Weighted TeraFLOPS (WT) and for “electronic assemblies” described in 4A003.c that are not capable of exceeding an “Adjusted Peak Performance” (“APP”) exceeding 3.0 Weighted TeraFLOPS (WT) in aggregation, except certain transfers as set forth in §746.3 (Iraq).*

*Note 2: Special Post Shipment Verification reporting and recordkeeping requirements for exports of computers to destinations in Computer Tier 3 may be found in § 743.2 of the EAR.*

\* \* \* \* \*

13. In Supplement No. 1 to Part 774, between the entries for ECCNs 4A102 and 4A980, add an entry for ECCN 4A611 as follows:

**4A611 Computers, and “parts,” “components,” “accessories,” and “attachments”  
“specially designed” therefor, “specially designed” for a military application that are not  
enumerated in any USML category are controlled by ECCN 3A611.**

14. In Supplement No. 1 to Part 774, amend ECCN 5A001 by revising the Related Controls paragraph of the List of Items Controlled section, to read as follows:

**5A001 Telecommunications systems, equipment, “components” and “accessories,” as follows (see List of Items Controlled).**

\* \* \* \* \*

List of Items Controlled

\* \* \* \* \*

*Related Controls:* 1. See USML Category XV for controls on telecommunications equipment, including the types of equipment described in ECCN 5A001.a.1, and any other equipment used

in satellites that is subject to the ITAR. See USML Category XI for controls on direction finding equipment including types of equipment in ECCN 5A001.e and any other military or intelligence electronic equipment subject to the ITAR. 2. See USML Category XI(a)(4)(iii) for controls on electronic attack and jamming equipment defined in 5A001.f and .h that are subject to the ITAR. 3. See also ECCNs 5A101, 5A980, and 5A991.

\* \* \* \* \*

15. In Supplement No. 1 to Part 774, between the entries for ECCNs 5A101 and 5A980, add an entry for ECCN 5A611 as follows:

**5A611 Telecommunications equipment, and “parts,” “components,” “accessories,” and “attachments” “specially designed” therefor, “specially designed” for a military application that are not enumerated in any USML category are controlled by ECCN 3A611.**

16. In Supplement No. 1 to Part 774, between the entries for ECCNs 6A226 and 6A991, add an entry for ECCN 6A611 as follows:

**6A611 Acoustic systems and equipment, radar, and “parts,” “components,” “accessories,” and “attachments” “specially designed” therefor, “specially designed” for a military application that are not enumerated in any USML category or other ECCN are controlled by ECCN 3A611.**

17. In Supplement No. 1 to Part 774, ECCN 7A006, revise the Reasons for Control paragraph of the License Requirements section to read as follows:

**7A006 Airborne altimeters operating at frequencies other than 4.2 to 4.4 GHz inclusive and having any of the following (see List of Items Controlled).**

License Requirements

Reason for Control: NS, MT, AT

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry	NS Column 1

MT applies to commodities in this entry that meet or exceed the parameters of 7A106	MT Column 1
AT applies to entire entry	AT Column 1

\* \* \* \* \*

18. In Supplement No. 1 to Part 774, between the entries for ECCNs 7A117 and 7A994, add an entry for ECCN 7A611 as follows:

**7A611 Navigation and avionics equipment and, systems and “parts,” “components,” “accessories,” and “attachments” “specially designed” therefor, “specially designed” for a military application that are not enumerated in any USML category or another “600 series” ECCN are controlled by ECCN 3A611.**

19. In Supplement No. 1 to Part 774, ECCN 7D101, revise the heading to read as follows:



**7D101 “Software” “specially designed” or modified for the “use” of equipment controlled for missile technology (MT) reasons by 7A001 to 7A006, 7A101 to 7A107, 7A115, 7A116, 7A117, 7B001, 7B002, 7B003, 7B101, 7B102, or 7B103.**

\* \* \* \* \*

21 In Supplement No. 1 to Part 774, between the entries for ECCNs 9A619 and 9A980, add an entry for ECCN 9A620 to read as follows:

**9A620 Cryogenic and “superconductive” equipment, as follows (see list of items controlled).**

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
------------	---

NS applies to entire entry	NS Column 1
RS applies to entire entry	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*LVS*: \$1500

*GBS*: N/A

*CIV*: N/A

**Special Conditions for STA**

*STA*: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 9A620.

## List of Items Controlled

*Related Controls:* Electronic items that are enumerated in USML Category XI or other USML categories, and technical data (including software) directly related thereto, are subject to the ITAR.

*Related Definitions:* N/A

*Items:*

- a. Equipment “specially designed” to be installed in a vehicle for military ground, marine, airborne, or space applications, and capable of operating while in motion and of producing or maintaining temperatures below 103 K (-170°C).

***Note to 9A620.a:*** ECCN 9A620.a includes mobile systems incorporating or employing “accessories” or “components” manufactured from non-metallic or non-electrical conductive materials such as plastics or epoxy-impregnated materials.

b. “Superconductive” electrical equipment (rotating machinery and transformers) “specially designed” to be installed in a vehicle for military ground, marine, airborne, or space applications, and capable of operating while in motion.

***Note to 9A620.b:** ECCN 9A620.b. does not control direct-current hybrid homopolar generators that have single-pole normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only superconducting components in the generator.*

c. through w. [Reserved]

x. “Parts,” “components,” “accessories” and “attachments” that are “specially designed” for a commodity controlled by ECCN 9A620.

***Note to 9A620.b:** Forgings, castings, and other unfinished products, such as extrusions and machined bodies, that have reached a stage in manufacture where they are clearly identifiable by mechanical properties, material composition, geometry, or function as commodities controlled by ECCN 9A620.x are controlled by ECCN 9A620.x.*

21. In Supplement No. 1 to Part 774, between the entries for ECCNs 9B619 and 9B990, add an entry for ECCN 9B620 to read as follows:

**9B620 Test, inspection, and production commodities for cryogenic and “superconductive” equipment (see List of Items controlled).**

### **License Requirements**

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry	NS Column 1
RS applies to entire entry	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*LVS*: \$1500

*GBS*: N/A

*CIV*: N/A

### **Special Conditions for STA**

*STA*: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 9B620.

### **List of Items Controlled**

*Related Controls*: N/A

*Related Definitions*: N/A

*Items*:

a. Test, inspection, and production end items and equipment “specially designed” for the “development,” “production,” repair, overhaul or refurbishing of items controlled in ECCN 9A620.

b. [Reserved]

22. In Supplement No. 1 to Part 774, between the entries for ECCNs 9D619 and 9D990, add an entry for ECCN 9D620 to read as follows:

**9D620 “Software” “specially designed” for cryogenic and “superconductive” equipment, as follows (see List of Items Controlled).**

License Requirements

*Reasons for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
------------	---

NS applies to entire entry	NS Column 1
RS applies to entire entry	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*CIV*: N/A

*TSR*: N/A

**Special Conditions for STA**

*STA*: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any “software” in 9D620.



## **List of Items Controlled**

*Related Controls:* “Software” directly related to articles enumerated on USML are subject to the control of that USML category.

*Related Definitions:* N/A

*Items:* Software “specially designed” for the “development,” “production,” operation, or maintenance of commodities controlled by ECCNs 9A620 or 9B620.

23. In Supplement No. 1 to Part 774, between the entries for ECCNs 9E619 and 9E990, add an entry for ECCN 9E620 to read as follows:

**9E620 Technology “required” for cryogenic and “superconductive” equipment, as follows (see List of Items Controlled).**

## **License Requirements**

*Reason for Control:* NS, RS, AT, UN

Control(s)	Country Chart (see Supp. No. 1 to part 738)
NS applies to entire entry	NS Column 1
RS applies to entire entry	RS Column 1
AT applies to entire entry	AT Column 1
UN applies to entire entry	See § 746.1(b) for UN controls

**List Based License Exceptions (see Part 740 for a description of all license exceptions)**

*CIV*: N/A

*TSR*: N/A

**Special Conditions for STA**

*STA*: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any technology in 9E620.

## List of Items Controlled

*Related Controls:* Technical data directly related to articles enumerated on USML are subject to the control of that USML category.

*Related Definitions:* N/A

*Items:* “Technology” “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities or software controlled by ECCN 9A620, 9B620 or 9D620.

24. Supplement No. 5 to Part 774 is revised by adding to the table, in numerical order, item No. 3 under the heading “0D521. Software” and item No. 2 to under the heading “0E521. Technology” to read as follows:

### **SUPPLEMENT NO. 5 TO PART 774 - ITEMS CLASSIFIED UNDER ECCNS 0A521, 0B521, 0C521, 0D521 AND 0E521**

\* \* \* \* \*

<b>Item descriptor.</b>  <i>Note:</i> The description must match by model number or a broader descriptor that does not necessarily need to be company specific.	<b>Date of initial or subsequent BIS classification.</b>  (ID = initial date; SD = subsequent date)	<b>Date when the item will be designated EAR99 unless reclassified in another ECCN or the 0Y521 classification is reissued.</b>	<b>Item-specific license exception eligibility</b>
---	---	---	--

\* \* \* \* \*

#### 0D521. Software

\* \* \* \* \*

No. 3  “Software” “specially designed” or modified for the “development” of “technology” controlled by 0E521 No. 2.	[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]	[INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]	License Exception GOV under § 740.11(b)(2)(ii) only.
---	--	--	--

#### 0E521. Technology

* * * * *			
<i>No. 2</i> “Technology” “required” for the “development” of aircraft wing folding systems, designed for aircraft powered by gas turbine engines.	[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]	[INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]	License Exception GOV under § 740.11(b)(2)(ii) only.
* * * * *			

Dated: June 19, 2014

Kevin J. Wolf

Assistant Secretary of Commerce for Export Administration

[FR Doc. 2014-14683 Filed 06/30/2014 at 8:45 am; Publication Date: 07/01/2014]